



SEGA.M
LIGHTING SOLUTIONS

Sega-M is an advanced engineering company, initially specialized in electrical products and low voltage switchboards thanks to over 40 years of its founders' experience.

Sega-M Manufacturing plants occupy 30,000 square meters in 10th of Ramadan City. Equipped with all necessary technical expertise along with finest production lines and ties with best known international manufacturers in electrical field; Sega-M

is a highly innovative and certified manufacturer for a wide range of electrical products.

Sega-M has entered lighting products arena since 2014, with an intention to fill the gap between Egyptian market demands and international development in lighting industry since the introduction of light emitting diodes (LEDs). LEDs being an energy saver have been targeted by Sega-M in response to the national effort to increase energy efficiency; both in production, i.e. Solar energy in which Sega-M has a long experience, and in consumption through LED efficacy and excellent lighting properties.

Sega-M does not just 'sell' luminaires. Sega-M can design lighting solutions using cutting-edge simulation technologies according to internationally recognized codes.

Our Mission

To provide high quality products for our clients, along with providing design services for custom-made products and turnkey solutions.

Our Vision

Serving the society and our beloved country through raising the standards of business and customer satisfaction. Saving the planet and cutting carbon emissions by providing energy efficient solutions in both production and distribution of electric power.

Sega-M Manufacturing facilities



CNC MILLING MACHINES



PUNCHING



BENDING



ROLL FORMING MACHINE



PLASTIC INJECTION



WELDING ROBOT



POWDER COATING



GASKET ROBOT



ROUTINE TEST



DIE CASTING MACHINE



SANDING MACHINE

Sega-M Labs



IP- FLUIDS



IP - DUST CHAMBER



SALT SPRAY



LIGHT TESTING - GONIOPHOTOMETER / SPECTROMETER

Sega-M Credentials







شهادة تجديد التأهيل

شهادة تجديد التأهيل رقم (٥) تاريخ إصدار الشهادة ٢٠١٧/١٢/١٤

نشهد هبة تقنية واستخدام الطاقة الجديدة والمتجددة بأن شركة (سيجا ام منتجات كهربائية ، صمى القوي /AVV) مؤهلة للعمل في مجال توريد وتركيب وتشغيل وصيانة وربط أنظمة الخلايا الشمسية بقدرة حتى ٥٠٠ * وات وبرنامجها بأخصيصة الكفاءة العامة، حيث تقوم الشركة بأداء الأعمال التالية للمعملا:-

- ١- توريد وتركيب التوصيلات الفنية والوقودية لمكونات نظام الخلايا الشمسية .
- ٢- إجراء الصيانة الدورية.
- ٣- حصول على الموافقات اللازمة من شركة توزيع الكهرباء طبقا للمواصفات الفنية والقواعد التطبيقية الصادرة في هذا الشأن .
- ٤- تنفيذ أعمال التركيبات المطلوبة طبقا للقواعد المعيارية والمعايير والتراخيص التطبيقية الصادرة في هذا الشأن .
- ٥- تشغيل واختبار جميع المعدات وتسلم نظم الخلايا الشمسية في حضور كل من العميل ومقنن شركة توزيع مع تسليم العميل جميع الرسومات والتكديرات الخاصة بالمعدات بالإضافة إلى تكديرات الصيانة بوضوح بها شرح وافى لاصلاح الصيانة الدورية والوقائية ، وأيضا جميع التيارات والمستندات المتعلقة بالبريدية المرسلة من العميل للمعدات بالمحافظة عليها .
- ٦- وضع تعليمات الأمان على المعدات والتجهيزات مع تدريب العاملين على إجراءات التشغيل وتأمين نظم الخلايا الشمسية .
- ٧- تقديم مشروع عقد صيانة فيها بعد انتهاء فترة الضمان اللازمة لنظام الخلايا الشمسية للتسليم في حالة طلبه ذلك .
- ٨- القيام بالإصلاحات الضرورية طبقا لتكاتف الموردين بين العميل والشركة .

- مدة التأهيل ثلاث سنوات سارية من ٢٠١٧/١٢/١٤ إلى ٢٠٢٠/١٢/١٤

- تقدم الشركة تقرير سنوي جاهزا عن تطور مشروعاتها .

- شهادة الحق في أداء هذه الشهادة إذا حدثت مخالفة تعلق بها جاء في البريد الإلكتروني في الشرائح التأهيل والتجديد وهذه الشهادة من الصيغة التالية دون أي معاملة عليها قبل الغير



مكتوب محمد مصطفى الجليل

مرفقات:
بيان الترخيص الذي قامت الشركة بتطويرها الى وضعها
بيان معتمد بالتقنين والتصميم والتنفيذ المشترك مع الشركة معتمدة بالعميل التي شاركها بها
بيان معتمد بمعدات تقنية الطاقة التي تستخدمها الشركة



Sega-M Lighting Products

1. Street Lighting

Fast track

Lamina

LED Street Lighting
Luminaire for Urban
and Suburban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

60-105W
6000°K
100 Lm/W
IP65



Physical Specifications

Mass	1.29kg
Dimensions	L 534mm*W 182mm* T 65mm
Body	Die Cast Aluminum, Electrostatically coated
Emitting Surface	PMMA Lenses
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 55mm,bolt tightened clamp
Running temperature	-20 to 45°C

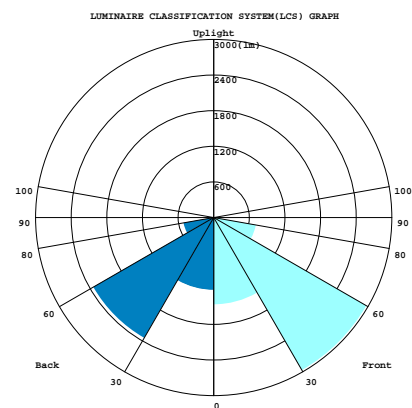
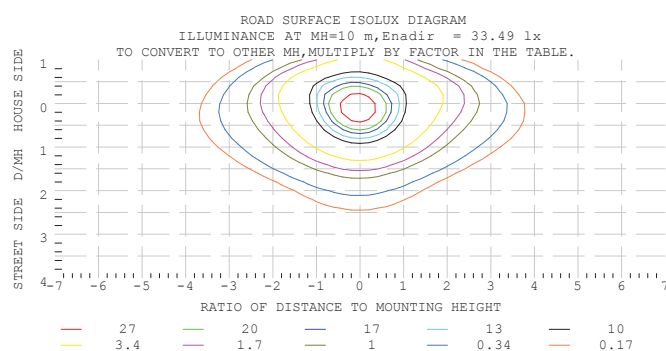
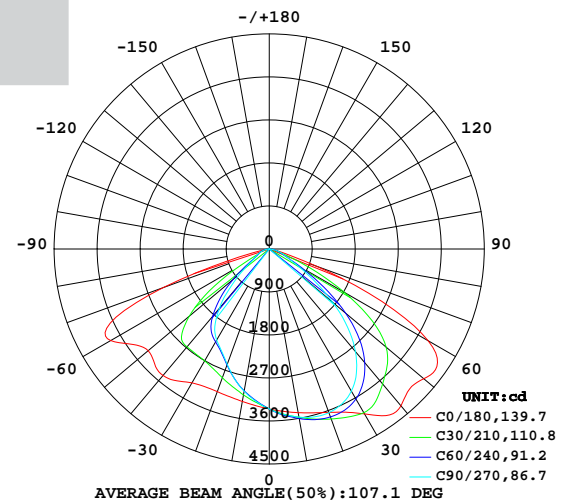


Through fine selection of body material and die casting method, mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. Light weight and slim for factor offer ease of installation and low mechanical stress on old retrofitting installations. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness.

Photometric Characteristics

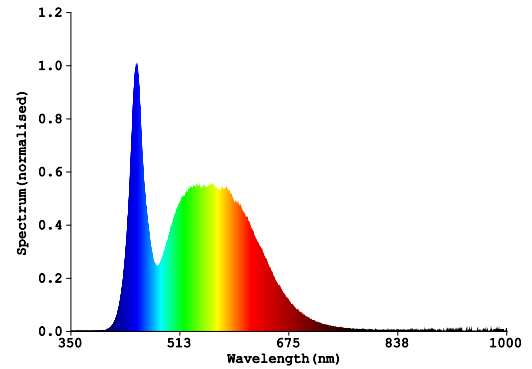
Light Source	SMD LEDs 2835
Total Luminous flux	10000 Lumen (+/-3%) @ 100W
Efficacy	100 Lm/W
SLI	17.909

High efficiency LEDs with precisely selected driver provide high efficacy. Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination. Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.

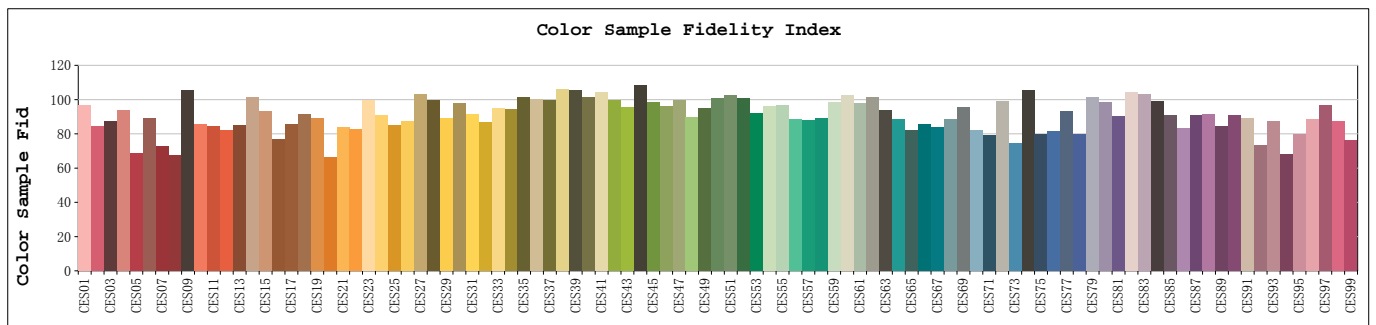
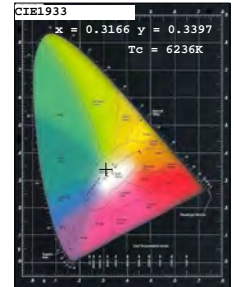
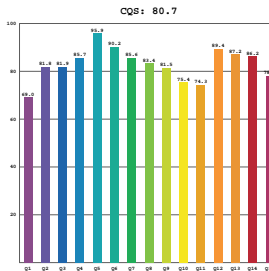
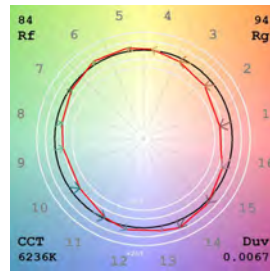
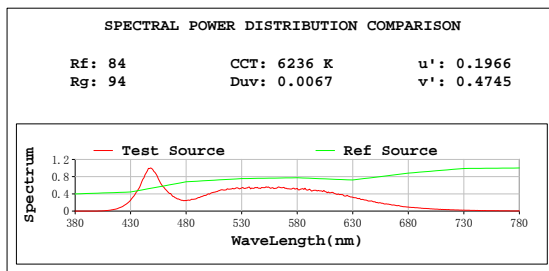


Color Spectrometry

Correlated Color temp.(CCT)	6236°K (Pure white)
Dominant Wavelength	496.6nm
Color Rendering index (Ra)	81.6
TM-30 Fidelity Index (Rf)	84
TM-30 Gamut Index (Rg)	94
CQS Qa	81.79
CQS TLCI	71
CQS	80.7

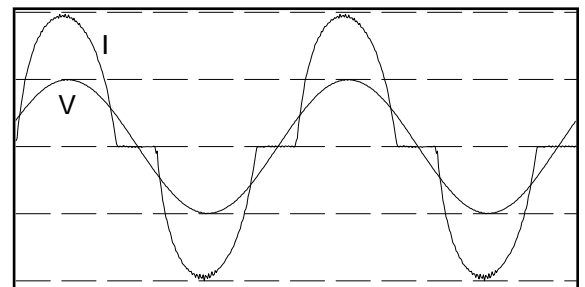


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.

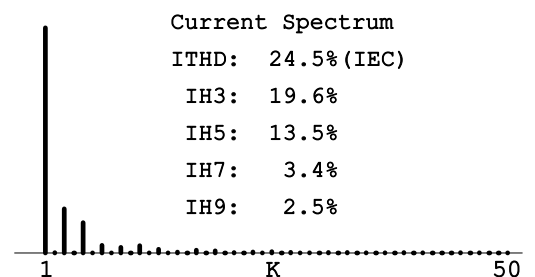


Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	170-400VAC, 50/60Hz
Power	60-105W (100W Def.)
Current	0.472 A (RMS)
Power Factor	0.969
Total Harmonic distortion (THDI)	24.5%
Surge Protection	4kV



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions). Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
STLS1-SMD100260--	Lamina1 LED Street Luminaire	100W	6000°K



Your ultimate solution for urban and suburban street lighting

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.



Sega-M Electrical Products

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 Commercial Division (Main): 87 Abou-Bakr Al-Seddik St., Safir Square, Heliopolis, Cairo, Tel.: (+202)24183122 – 24183144, Fax: (+202) 24185022, sales@sega-m.com
 Commercial Division (Lighting): Milsa apartment building no.6 , Nasr City, Cairo. Tel.: (+202)24181878, sales.lighting@sega-m.com

www.sega-m.com



Lamina

Two - Compact

LED Street Lighting
Luminaire for
Suburban and
Private entities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

10-50W
6000°K
100 Lm/W
IP65



Physical Specifications

Mass	0.995kg
Dimensions	L 334mm*W 128mm* T 65mm
Body	Die Cast Aluminum, Electrostatically coated
Emitting Surface	PMMA Lenses
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 50mm, Tightening bolts
Running temperature	-20 to 45°C

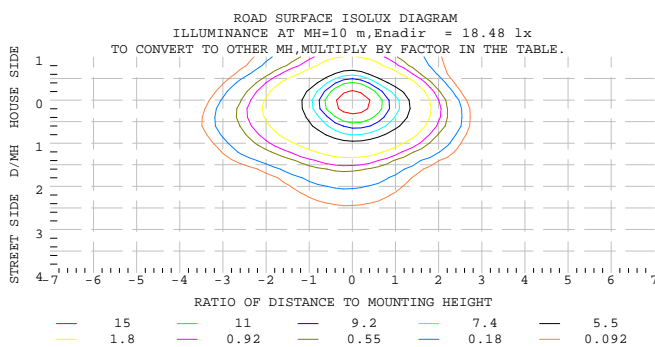
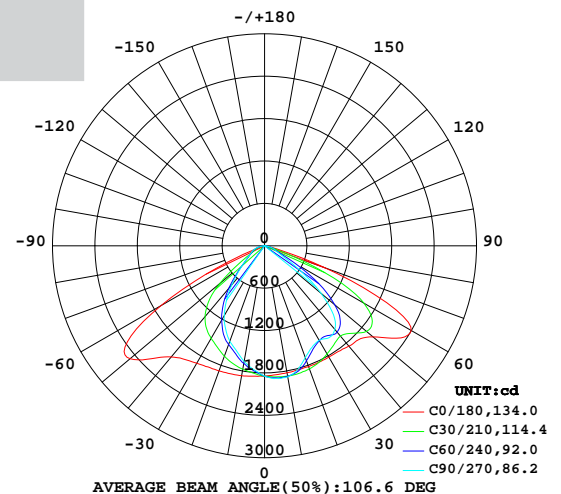


Through fine selection of body material and die casting method, mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. Light weight and slim for factor offer ease of installation and low mechanical stress on old retrofitting installations. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness.

Photometric Characteristics

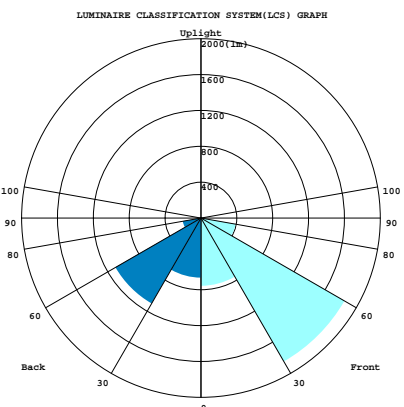
Light Source	SMD LEDs 2835
Total Luminous flux	5000 Lumen (+/-3%) @ 50W
Efficacy	100 Lm/W
SLI	17.305

High efficiency LEDs with precisely selected driver provide high efficacy. Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination. Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.



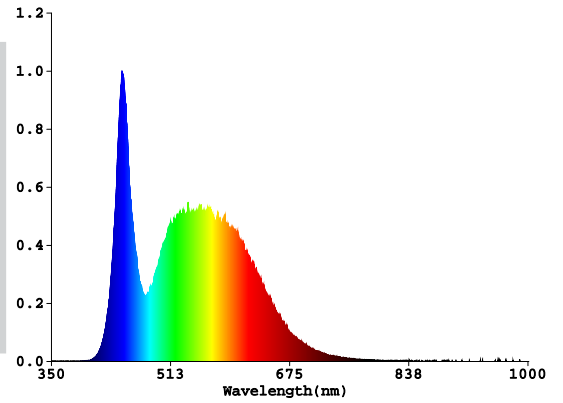
According to LB/T001-2008:
 U = Emin/Eavg = 0.294
 Eavg = 15.08 lx

HEIGHT	FACTOR
5 m	4.000
6 m	2.778
7 m	2.041
8 m	1.563
9 m	1.235
10 m	1.000
11 m	0.826
12 m	0.694
13 m	0.592
14 m	0.510
15 m	0.444
16 m	0.391

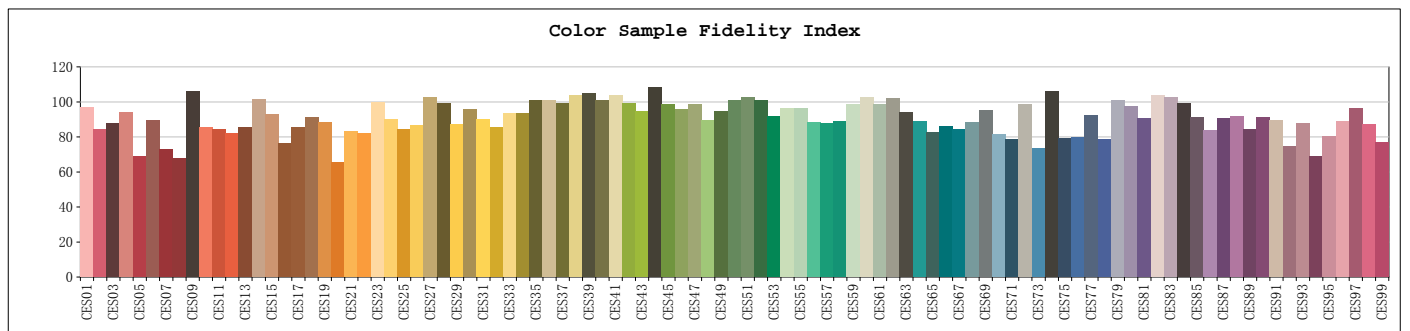
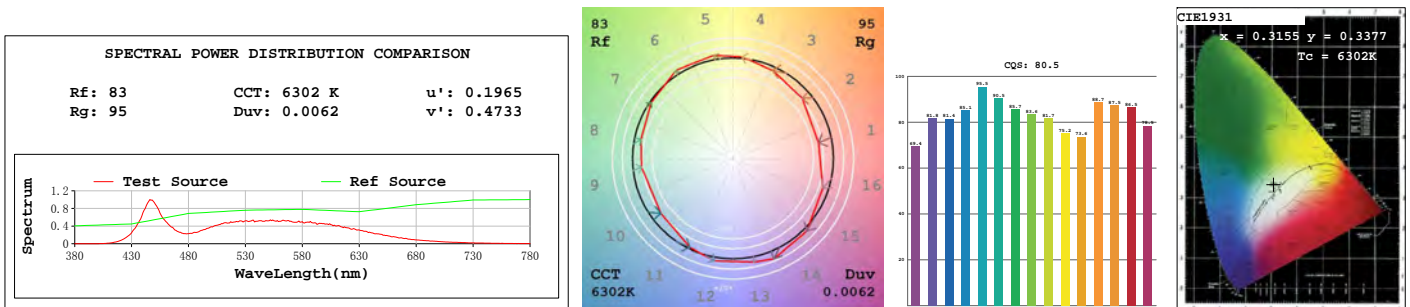


Color Spectrometry

Correlated Color temp.(CCT)	6300°K (Pure white)
Dominant Wavelength	494.9nm
Color Rendering index (Ra)	81.5
TM-30 Fidelity Index (Rf)	83
TM-30 Gamut Index (Rg)	95
CQS Qa	81.75
CQS TLCI	71
CQS	80.5

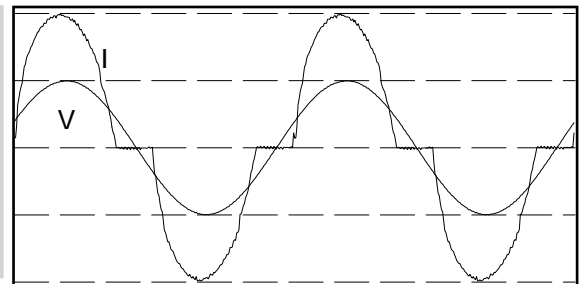


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.

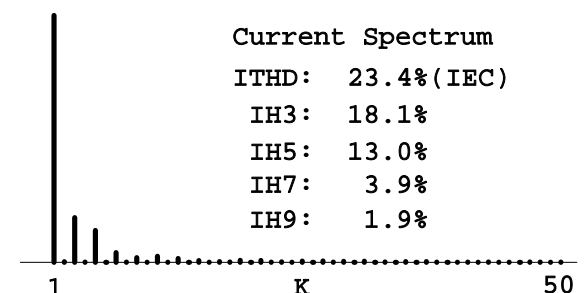


Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	170-400VAC, 50/60Hz
Power	10-50W (50W Def.)
Current	0.246 A (RMS)
Power Factor	0.971
Total Harmonic distortion (THDI)	23.4%
Surge Protection	4kV



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions). Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
STLS2-SMD05260--	Lamina1 LED Street Luminaire	50W	6000°K



Your ultimate solution for suburban and private entities street lighting

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

Professional

Ikthus

LED Street Lighting
Luminaire for main
roads and urban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

60-130W
4000°K
128 Lm/W
IP65



Physical Specifications

Mass	3.65kg
Dimensions	L 625mm*W 280mm* T 65mm
Body	Electrostatically coated Aluminum, die cast+ Press formed sheet + sections
Emitting Surface	PMMA Lenses
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, bolt tightened clamp
Running temperature	-20 to 45°C



Lifetime

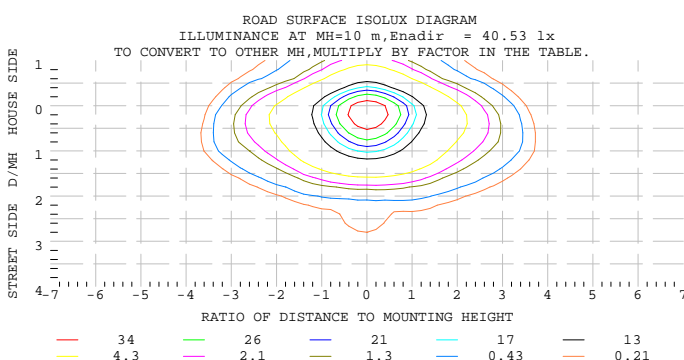
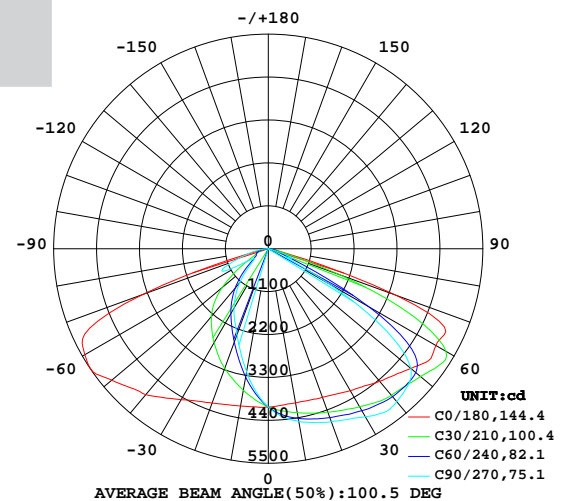
@ Running temperature	50°C is 50,000 hours (Tested by Cairo university Faculty of engineering Energy research center according to IEC standards)
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Through fine selection of body material and combination of die casting, Press forming sections mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness.

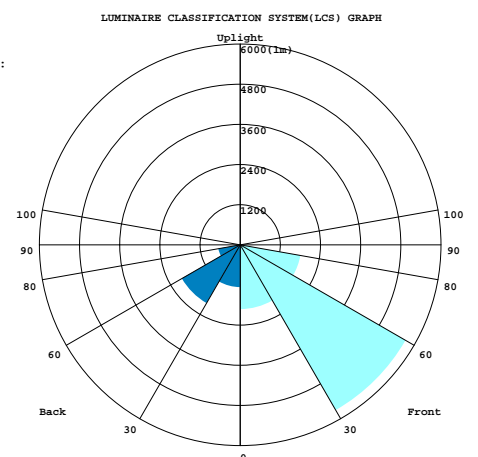
Photometric Characteristics

Light Source	SMD LEDs 3030
Total Luminous flux	13440 Lumen (+/-1%) @ 105W
Efficacy	128 Lm/W
SLI	18.566

High efficiency LEDs with precisely selected driver provide high efficacy.
 Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination.
 Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.

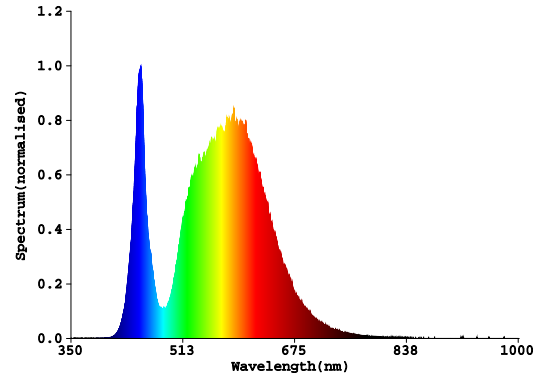


According to LB/T001-2008:
 U = Emin/Eavg = 0.219
 Eavg = 35.55 lx

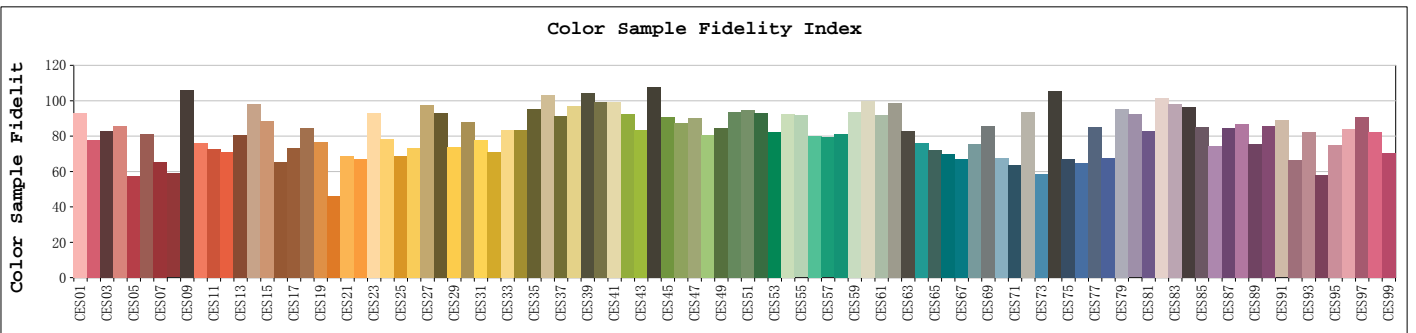
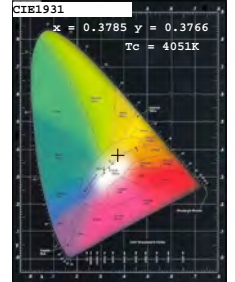
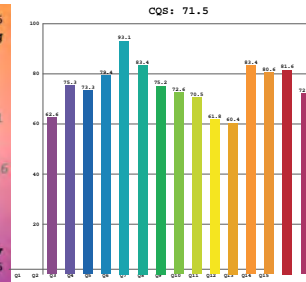
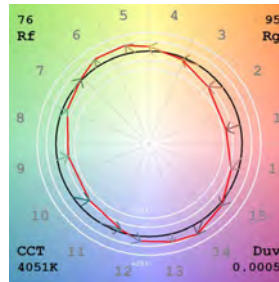
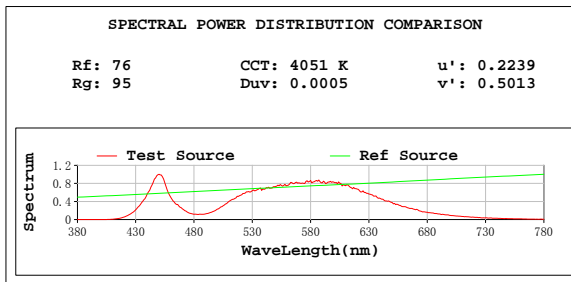


Color Spectrometry

Correlated Color temp.(CCT)	4051°K (daylight)
Dominant Wavelength	578.6nm
Color Rendering index (Ra)	74.1
TM-30 Fidelity Index (Rf)	76
TM-30 Gamut Index (Rg)	95
CQS Qa	73.54
CQS TLCI	49
CQS	72.3

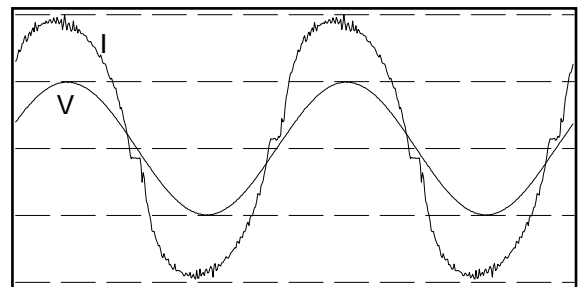


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



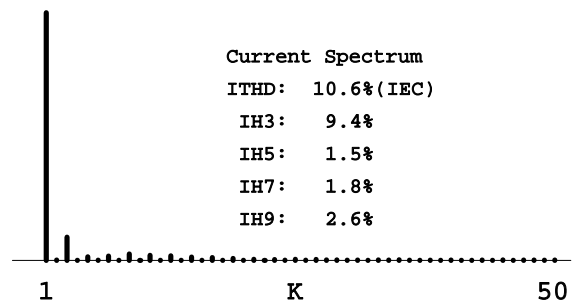
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	60-105W (105W Def.)
Current	0.486 A (RMS)
Power Factor	0.985
Total Harmonic distortion (THDI)	10.6%
Surge Protection	2KVAC IP/FG
Short circuit / over-temperature	Protected, self restart



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
IKTHUS-SMD105240--	Ikthus LED Street Luminaire	105W	4000°K



Your ultimate solution for main roads and urban communities

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request
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Ikthus

Shield

LED Street Lighting
Luminaire for main
roads and urban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

60-130W
4000°K
114 Lm/W
IP65



Physical Specifications

Mass	5.19kg
Dimensions	L 625mm*W 280mm* T 80mm
Body	Electrostatically coated Aluminum, die cast+ Press formed sheet + sections
Emitting Surface	PMMA Lenses + tempered glass shield
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, bolt tightened clamp
Running temperature	-20 to 45°C

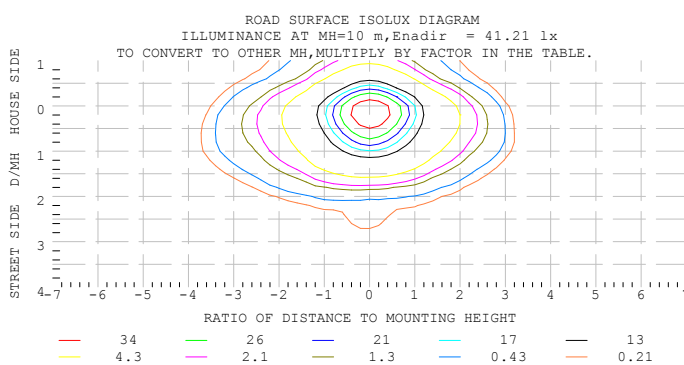
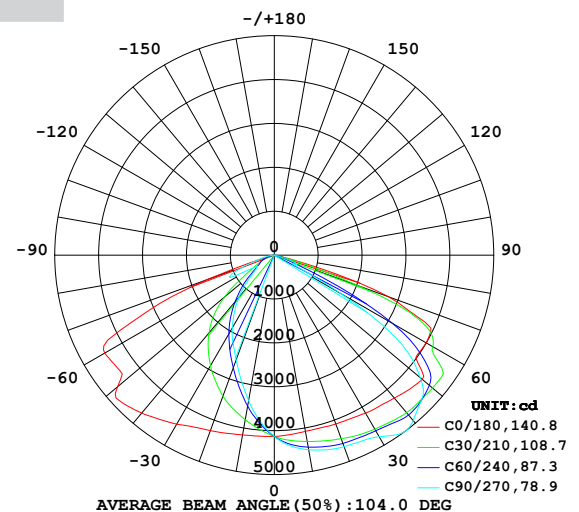


Through fine selection of body material and combination of die casting, Press forming sections mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness. Extra Shield of tempered glass adds even more strength plus chemical stability and invulnerability against extreme harsh weather conditions of highly polluted or high speed wind dust

Photometric Characteristics

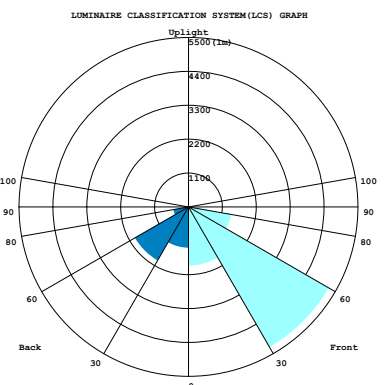
Light Source	SMD LEDs 3030
Total Luminous flux	12427 Lumen (+/-1%) @ 108.8W
Efficacy	114 Lm/W
SLI	17.484

High efficiency LEDs with precisely selected driver provide high efficacy. Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination. Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.



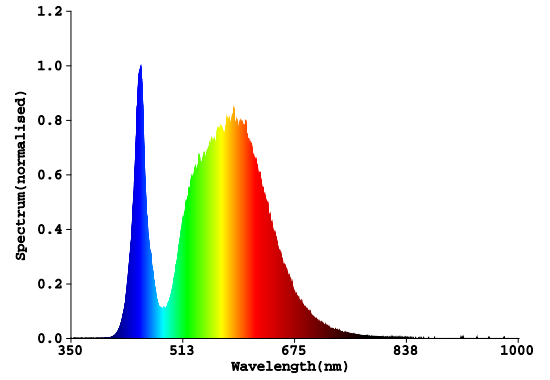
According to LE/T001-2008:
 U = Emin/Eavg = 0.199
 Eavg = 33.73 lx

HEIGHT	FACTOR
5 m	4.000
6 m	2.778
7 m	2.041
8 m	1.563
9 m	1.235
10 m	1.000
11 m	0.826
12 m	0.694
13 m	0.592
14 m	0.510
15 m	0.444
16 m	0.391

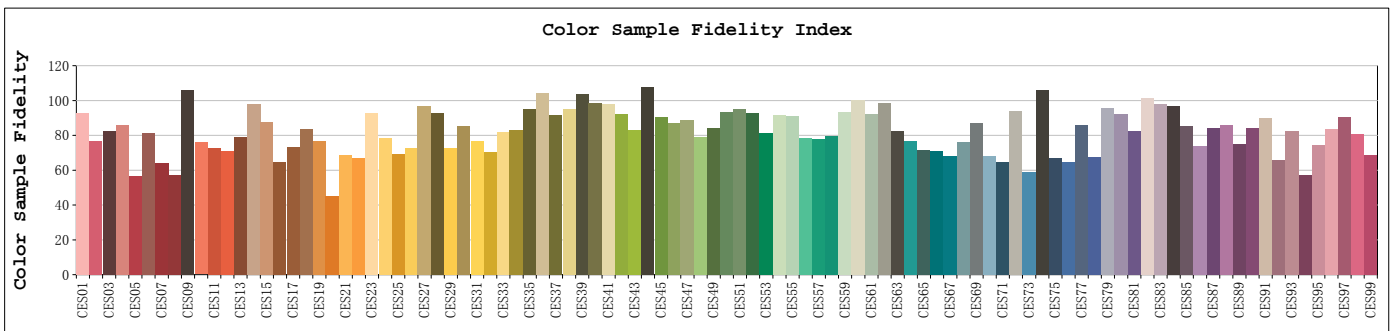
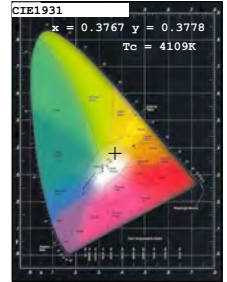
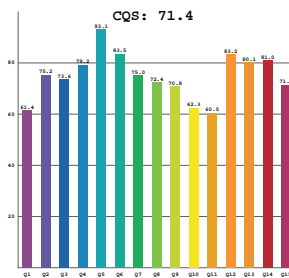
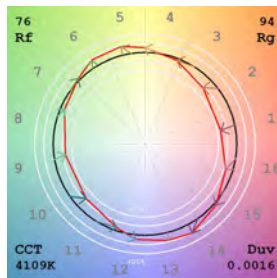
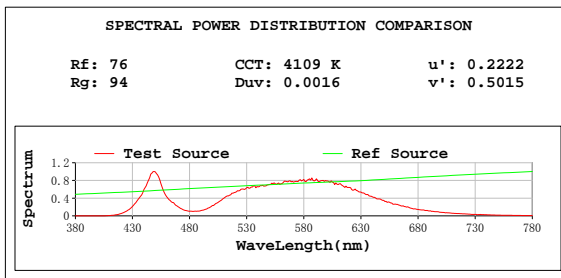


Color Spectrometry

Correlated Color temp.(CCT)	4100°K (Daylight)
Dominant Wavelength	577.8nm
Color Rendering index (Ra)	73.5
TM-30 Fidelity Index (Rf)	76
TM-30 Gamut Index (Rg)	94
CQS Qa	73.37
CQS TLCI	50
CQS	71.4

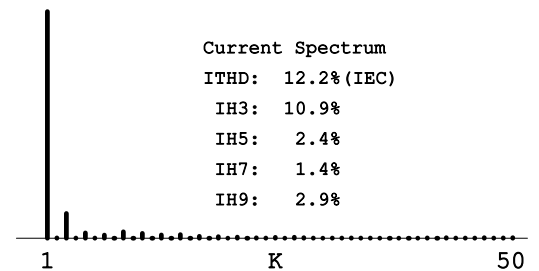
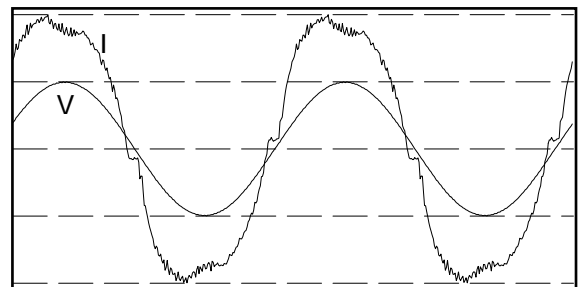


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	60-105W (105W Def.)
Current	0.486 A (RMS)
Power Factor	0.983
Total Harmonic distortion (THDI)	12.2%
Surge Protection	2KVAC IP/FG
Short circuit / over-temperature	Protected, self restart



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)

Art. no.	Type	Power	CCT
IKTHUSG-SMD105240--	Ikthus Shield LED Street Luminaire	105W	4000°K



Your ultimate solution for main roads, urban communities and highly polluted facilities.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request
Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.
Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.



Sega-M Electrical Products

Industrial Division: Industrial Area A3, 10th of Ramadan City, Tel.: (+2)0554332072 - 0554332080, Fax: (+2)0554332067, cus.service@sega-m.com, sega-m@sega-m.com
Commercial Division (Main): 87 Abou-Bakr Al-Seddik St., Safir Square, Heliopolis, Cairo, Tel.: (+202)24183122 – 24183144, Fax: (+202) 24185022, sales@sega-m.com
Commercial Division (Lighting): Milsa apartment building no.6 , Nasr City, Cairo. Tel.: (+202)24181878, sales.lighting@sega-m.com

www.sega-m.com



Rocky

LED Street Lighting
Luminaire for main
roads and urban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

105W
4000°K
118 Lm/W
IP65



Physical Specifications

Mass	6.0kg
Dimensions	L 500mm*W 240mm* T 55mm
Body	Electrostatically coated die cast Aluminum,
Emitting Surface	Tempered glass clear diffuser
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, bolt tightened clamp
Running temperature	-20 to 45°C



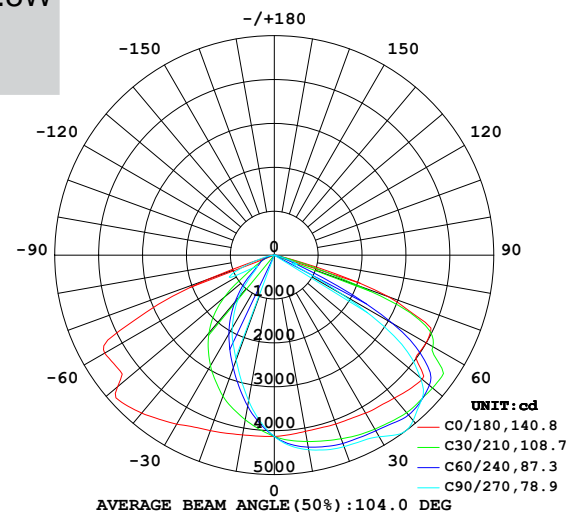
Lifetime

@ Running temperature	50°C is 50,000 hours (Tested by Cairo university Faculty of engineering Energy research center according to IEC standards)
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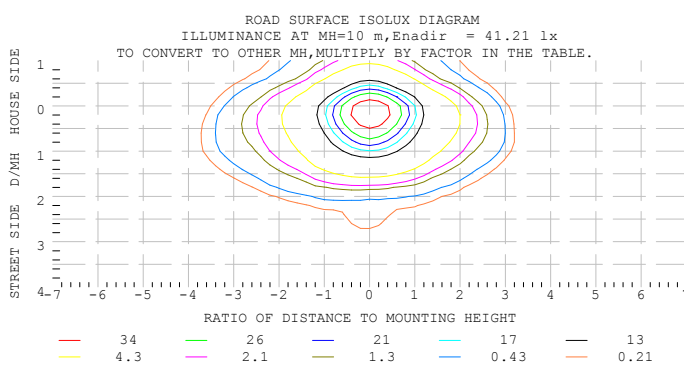
Through fine selection of body material and die casting technology mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness. Extra Shield of tempered glass adds even more strength plus chemical stability and invulnerability against extreme harsh weather conditions of highly polluted or high speed wind dust environments

Photometric Characteristics

Light Source	SMD LEDs 3030
Total Luminous flux	12427 Lumen (+/-1%) @ 108.8W
Efficacy	114 Lm/W
SLI	17.484

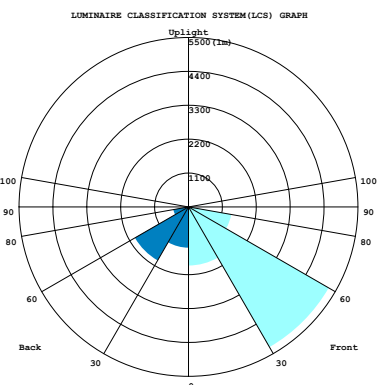


High efficiency LEDs with precisely selected driver provide high efficacy.
Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination.
Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.



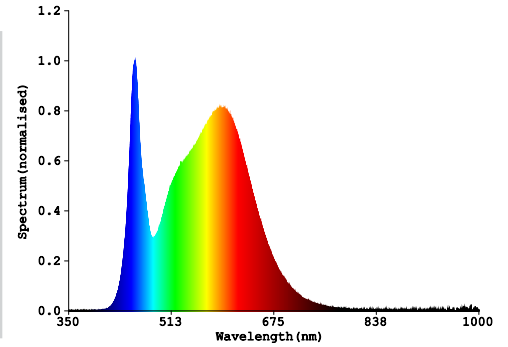
According to LE/T001-2008:
U = Emin/Eavg = 0.199
Eavg = 33.73 lx

HEIGHT	FACTOR
5 m	4.000
6 m	2.778
7 m	2.041
8 m	1.563
9 m	1.235
10 m	1.000
11 m	0.826
12 m	0.694
13 m	0.592
14 m	0.510
15 m	0.444
16 m	0.391

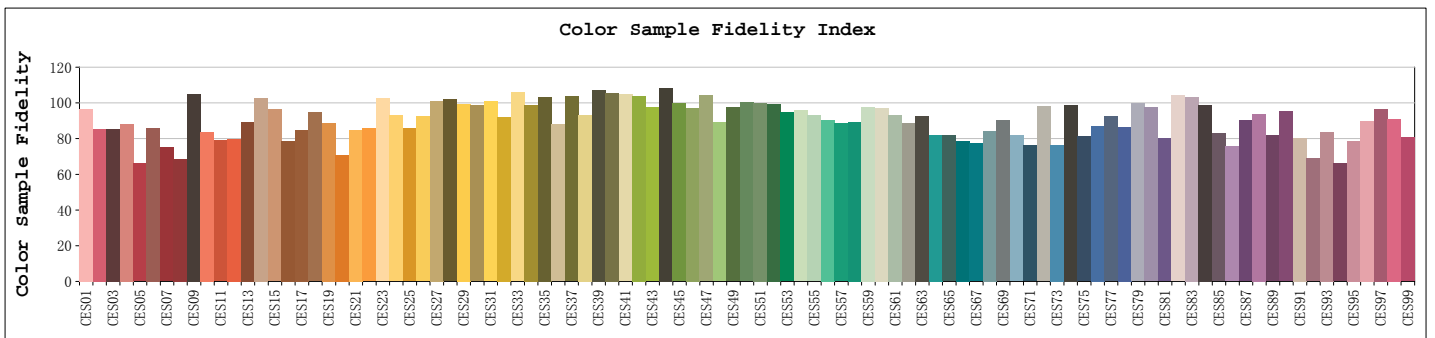
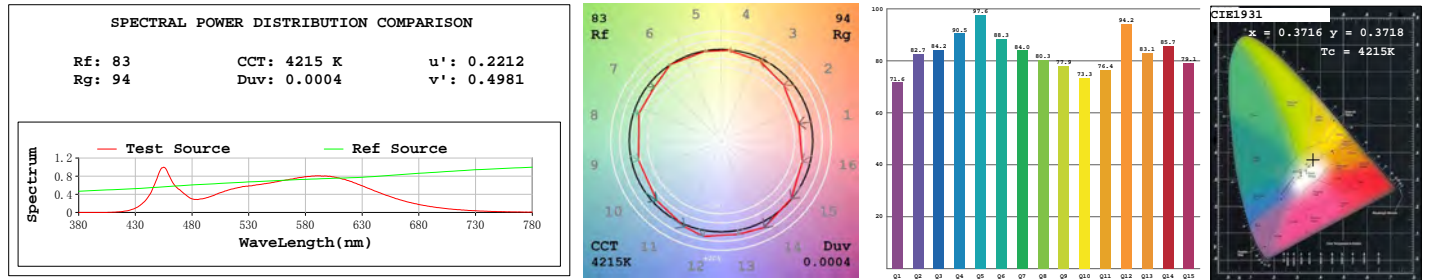


Color Spectrometry

Correlated Color temp.(CCT)	4215°K (Neutral white/daylight)
Dominant Wavelength	578.0nm
Color Rendering index (Ra)	83.2
TM-30 Fidelity Index (Rf)	83
TM-30 Gamut Index (Rg)	94
CQS Qa	81.83
CQS TLCI	67
CQS	81.3

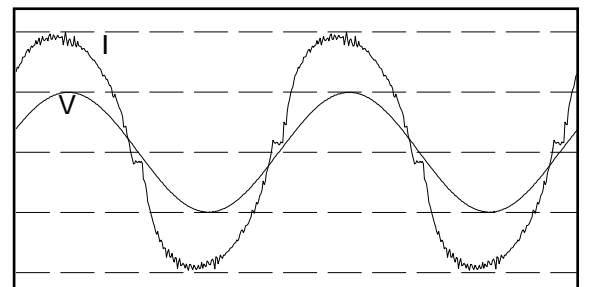


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



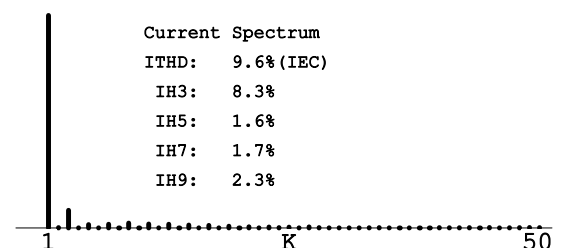
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	60-150W (105W Def.)
Current	0.487 A (RMS)
Power Factor	0.984
Total Harmonic distortion (THDI)	9.6%
Withstand voltage	2KVAC IP/FG
Short circuit / over temperature	Protected, self restart



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
ROCKYN-SMD105240--	Rocky LED Street Luminaire	105W	4000°K



Your ultimate solution for main roads and urban communities lighting

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.



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 Commercial Division (Lighting): Milsa apartment building no.6 , Nasr City, Cairo. Tel.: (+202)24181878, sales.lighting@sega-m.com

www.sega-m.com



Rocky

Lens-free

LED Street Lighting
Luminaire for main
roads and urban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

105W
4000°K
118 Lm/W
IP65



Physical Specifications

Mass	6.0kg
Dimensions	L 500mm*W 240mm* T 55mm
Body	Electrostatically coated die cast Aluminum,
Emitting Surface	Tempered glass clear diffuser
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, bolt tightened clamp
Running temperature	-20 to 45°C



Lifetime

@ Running temperature	50°C is 50,000 hours (Tested by Cairo university Faculty of engineering Energy research center according to IEC standards)
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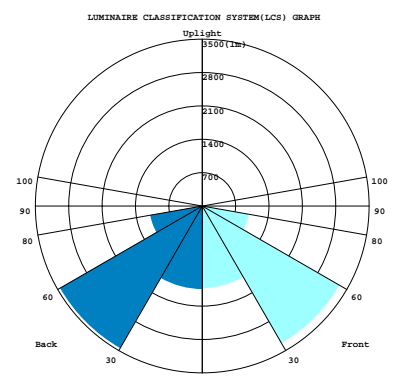
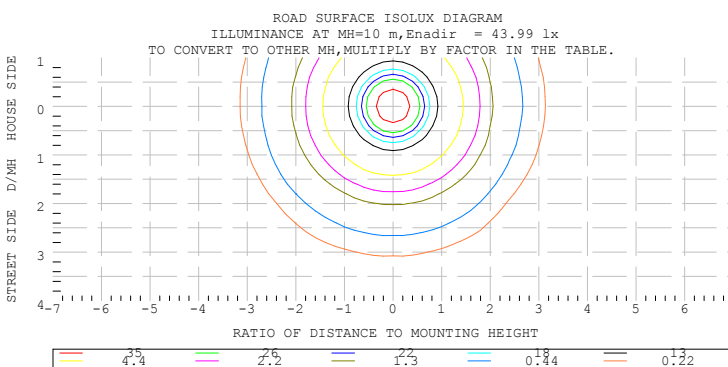
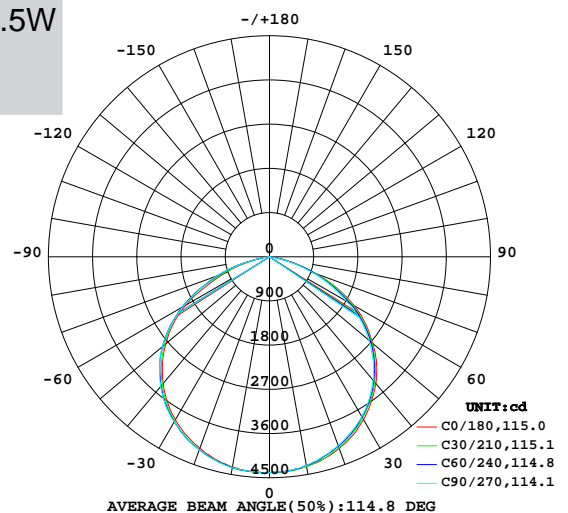
Through fine selection of body material and die casting technology mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality clear glass diffuser offers sustained chromatic and photometric properties without compromising strength or hardness.

Photometric Characteristics

Light Source	SMD LEDs 3030
Total Luminous flux	12382 Lumen (+/-1%) @ 105.5W
Efficacy	117.35 Lm/W
SLI	19.075

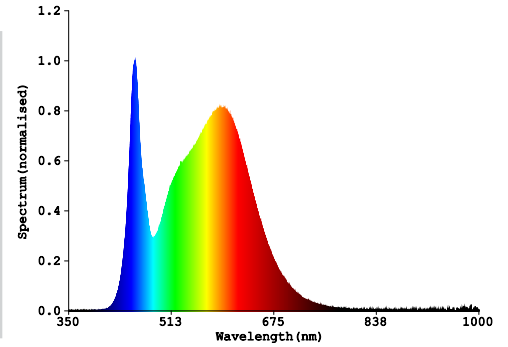
High efficiency LEDs with precisely selected driver provide high efficacy.

Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.

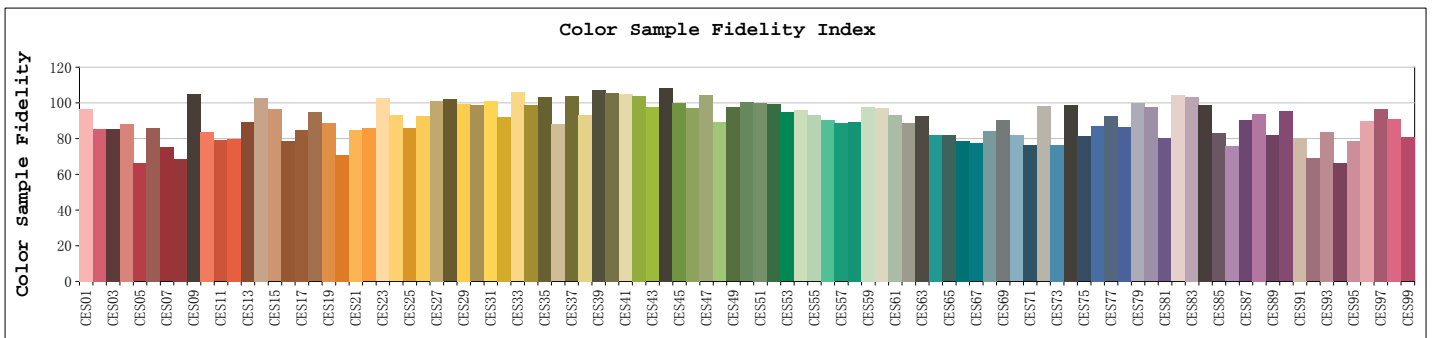
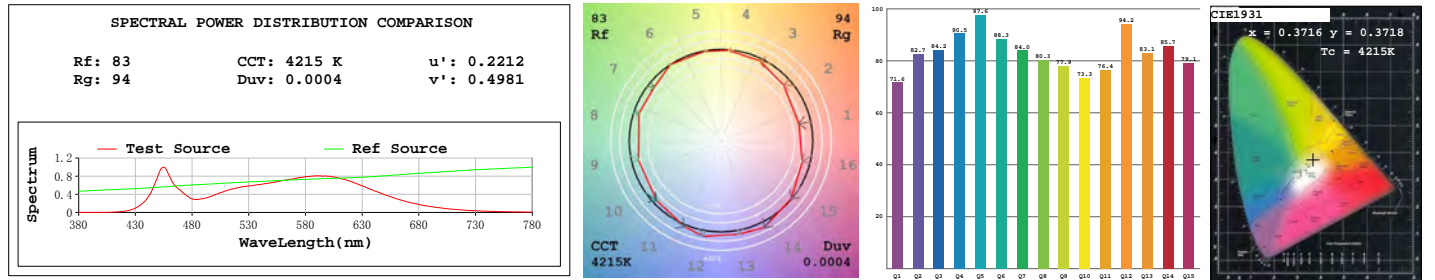


Color Spectrometry

Correlated Color temp.(CCT)	4215°K (Neutral white/daylight)
Dominant Wavelength	578.0nm
Color Rendering index (Ra)	83.2
TM-30 Fidelity Index (Rf)	83
TM-30 Gamut Index (Rg)	94
CQS Qa	81.83
CQS TLCI	67
CQS	81.3

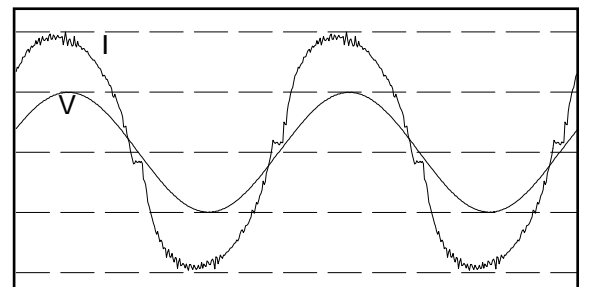


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



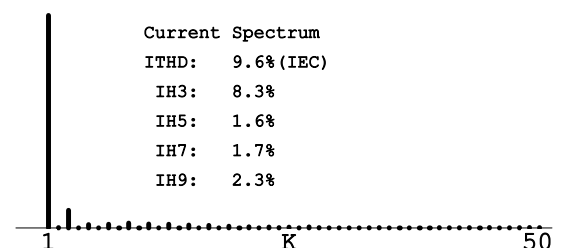
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	60-150W (105W Def.)
Current	0.487 A (RMS)
Power Factor	0.984
Total Harmonic distortion (THDI)	9.6%
Withstand voltage	2KVAC IP/FG
Short circuit / over temperature	Protected, self restart



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
ROCKYR-SMD105240--	Rocky LED Street Luminaire (Lens Free)	105W	4000°K



Your ultimate solution for main roads and urban communities lighting

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Rocky

Lens-free

LED Street Lighting
Luminaire for main
roads and urban
communities

Versatile, modular
and highly
adaptable

Suitable for both
new installations
and retrofitting

150W
6000°K
92 Lm/W
IP65



Physical Specifications

Mass	6.0kg
Dimensions	L 500mm*W 240mm* T 55mm
Body	Electrostatically coated die cast Aluminum,
Emitting Surface	Tempered glass clear diffuser
Ingression Protection	IP65
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, bolt tightened clamp
Running temperature	-20 to 45°C



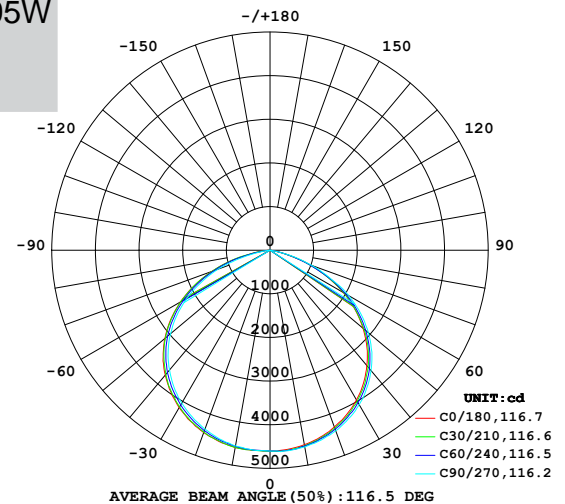
Lifetime

@ Running temperature	50°C is 50,000 hours (Tested by Cairo university Faculty of engineering Energy research center according to IEC standards)
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Through fine selection of body material and die casting technology mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality clear glass diffuser offers sustained chromatic and photometric properties without compromising strength or hardness.

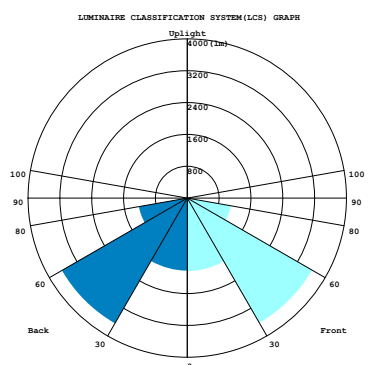
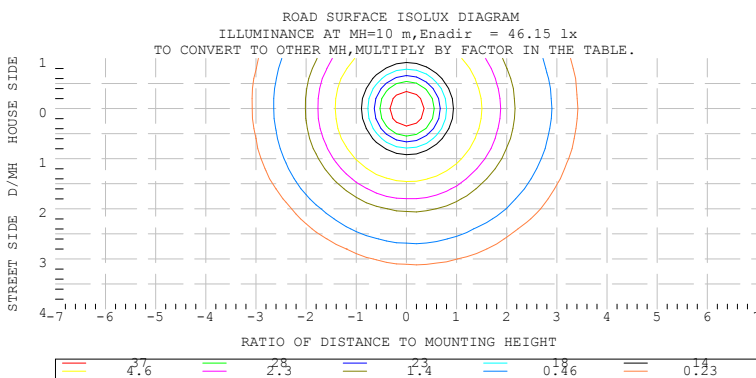
Photometric Characteristics

Light Source	SMD LEDs 3030
Total Luminous flux	13328 Lumen (+/-1%)@144.95W
Efficacy	91.95 Lm/W
SLI	17.895



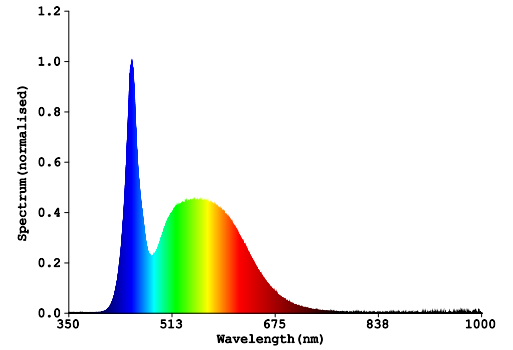
High efficiency LEDs with precisely selected driver provide high efficacy.

Can easily achieve illumination class requirements for A1-6 and S1-6 Classes for Urban/Suburban areas, along with ME4A for Motorized roads.

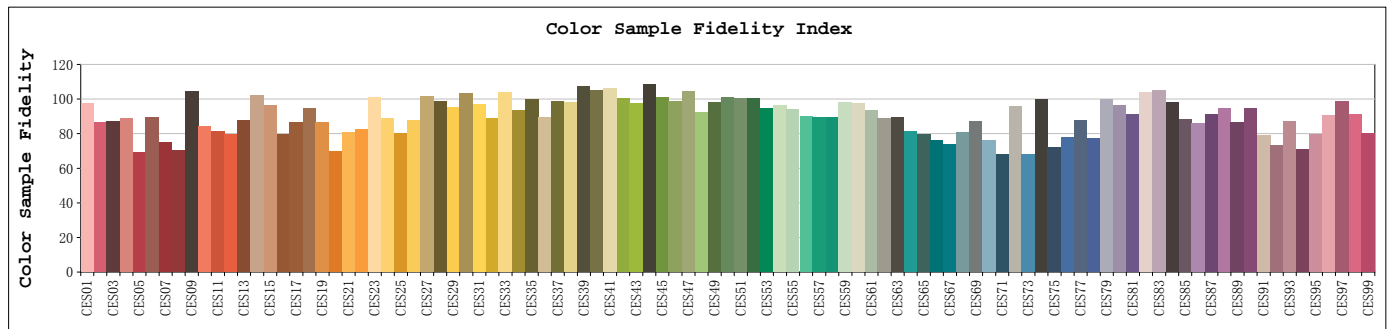
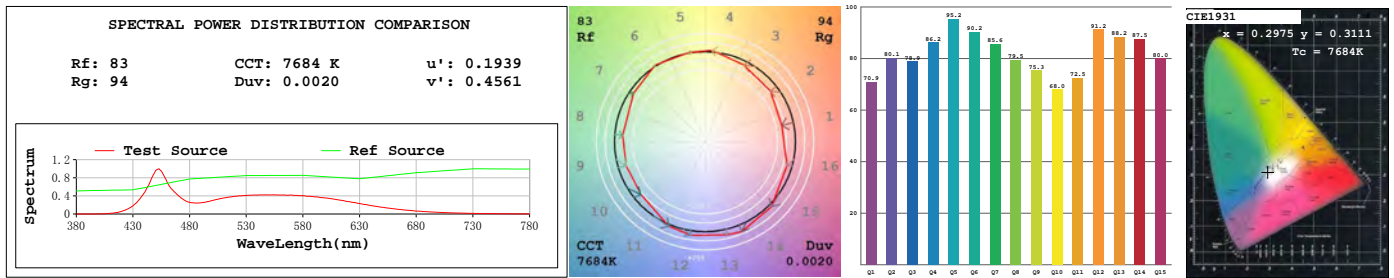


Color Spectrometry

Correlated Color temp.(CCT)	7684°K (Cool white)
Dominant Wavelength	483.2nm
Color Rendering index (Ra)	83.8
TM-30 Fidelity Index (Rf)	83
TM-30 Gamut Index (Rg)	94
CQS Qa	80.35
CQS TLCI	67
CQS	79.8

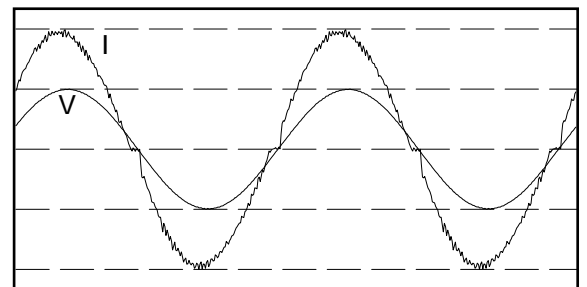


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



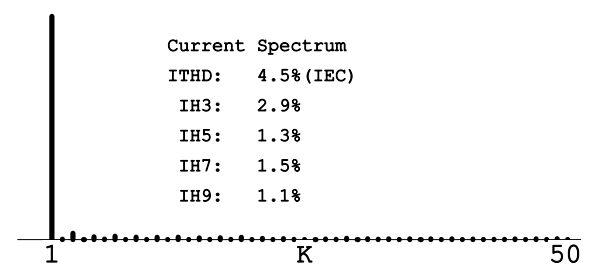
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	150W
Current	0.665 A (RMS)
Power Factor	0.989
Total Harmonic distortion (THDI)	4.5%
Withstand voltage	2KVAC IP/FG
Short circuit / over temperature	Protected, self restart



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
ROCKYR-SMD150260--	Rocky LED Street Luminaire (Lens Free)	150W	6000°K



Your ultimate solution for main roads and urban communities lighting

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

Super heavy duty

Pacific

Super heavy-duty street lighting luminaire for highways, main roads and streets and harsh areas

Sophisticated design with extreme safety margins, wide power range and future development capability

Suitable for both new installations and retrofiting

105W
4000°K
123 Lm/W
IP66



Physical Specifications

Mass	10.45kg
Dimensions	L 740mm*W 325mm* T 120mm
Body	Electrostatically coated die cast Aluminum
Emitting Surface	PMMA Lenses + tempered glass shield
Ingression Protection	IP66
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, direct bolt tightening adjustable +/-15°
Running temperature	-20 to 45°C

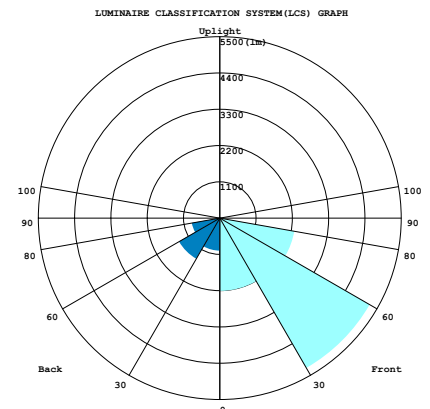
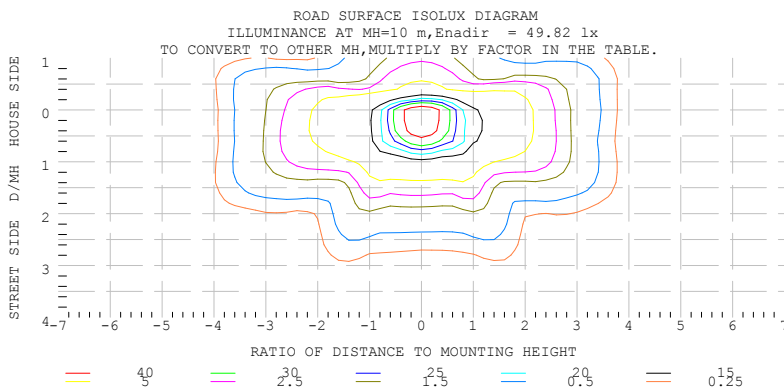
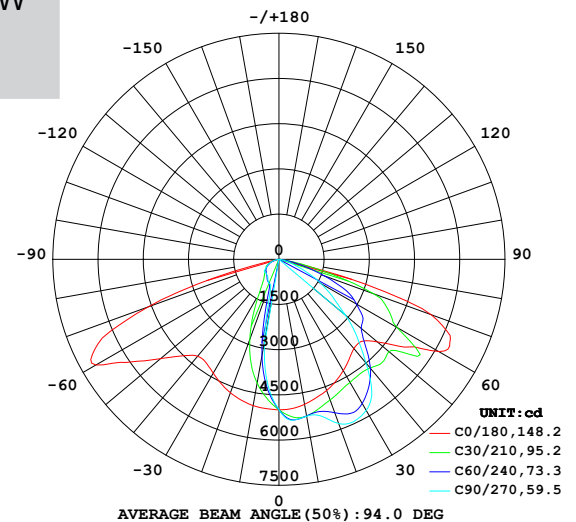


Through fine selection of body material and die casting method, mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness. Extra Shield of tempered glass adds even more strength plus chemical stability and invulnerability against extreme harsh weather conditions of highly polluted or high speed wind dust environments. Modular body design allows part exchange. An eye on the future design is a concept realized through a Large heat sink design covering even more than maximum power, along with large driver box allowing variety of devices including upcoming technologies like master control and communication through wireless channels

Photometric Characteristics

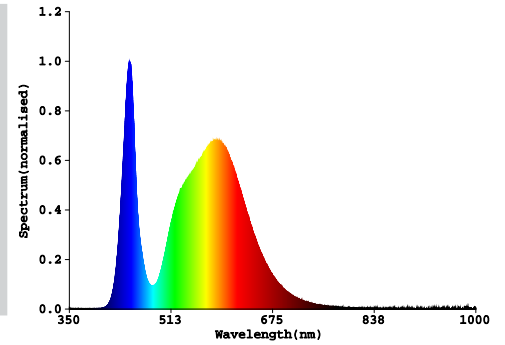
Light Source	SMD LEDs 3030 OSRAM
Total Luminous flux	13070 Lumen (+/-1%) @ 106W
Efficacy	122.99 Lm/W
SLI	18.617

High efficiency LEDs with precisely selected driver provide high efficacy. Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination. Can easily achieve illumination class requirements for entire ME class along with A1-6 and S1-6 Classes for urban / suburban areas

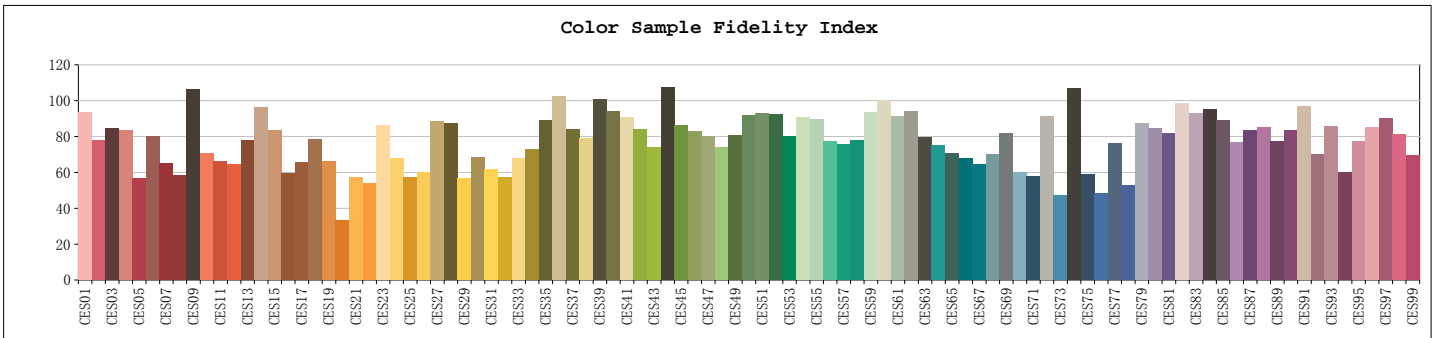
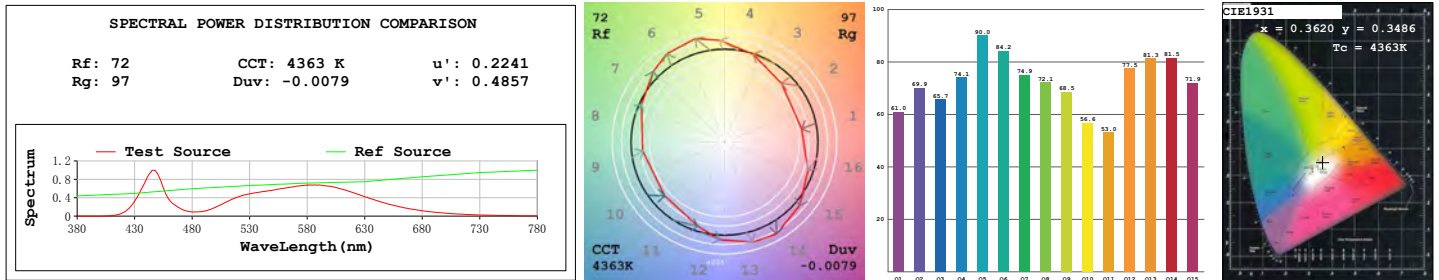


Color Spectrometry

Correlated Color temp.(CCT)	4363°K (Daylight)
Dominant Wavelength	585.8nm
Color Rendering index (Ra)	74
TM-30 Fidelity Index (Rf)	72
TM-30 Gamut Index (Rg)	97
CQS Qa	70.43
CQS TLCI	46
CQS	66.9

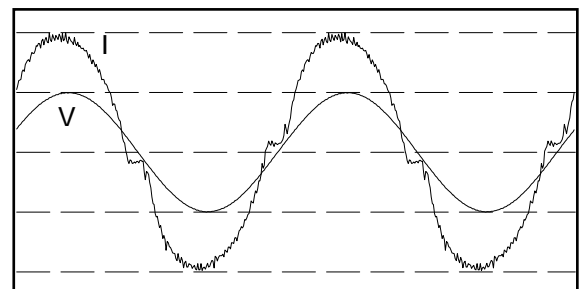


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



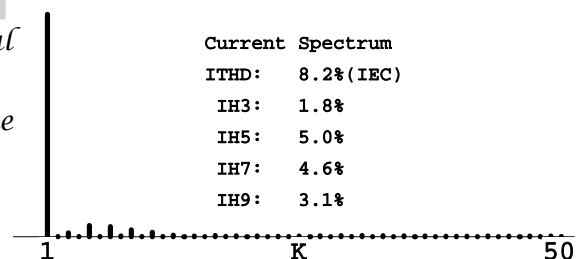
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	105W
Current	0.489 A (RMS)
Power Factor	0.986
Total Harmonic distortion (THDI)	8.2%
Withstand voltage	2KVAC IP/FG
Short circuit / over temperature	Protected, self restart
Physical Protection	Driver cover Electromechanical power supply interlock



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
PACIFIC-SMD105240--	Pacific LED Street Luminaire	105W	4000°K



The Crown Jewel of Sega-M Street lighting solutions.
Super heavy duty performance for all applications

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Pacific

Super heavy-duty street lighting luminaire for highways, main roads and streets and harsh areas

Sophisticated design with extreme safety margins, wide power range and future development capability

Suitable for both new installations and retrofitting

150W
4000°K
113 Lm/W
IP66



Physical Specifications

Mass	10.45kg
Dimensions	L 740mm*W 325mm* T 120mm
Body	Electrostatically coated die cast Aluminum
Emitting Surface	PMMA Lenses + tempered glass shield
Ingression Protection	IP66
Mechanical Impact resistance	IK08
Mounting	Pole arm up to 60mm, direct bolt tightening adjustable +/-15°
Running temperature	-20 to 45°C

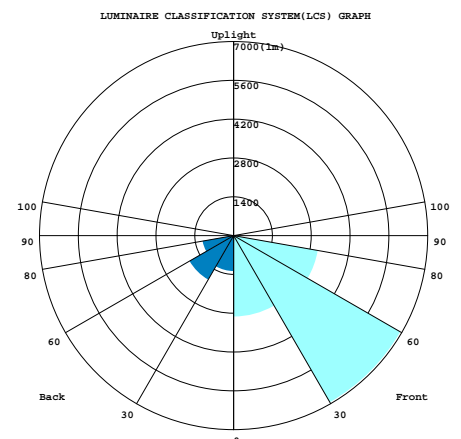
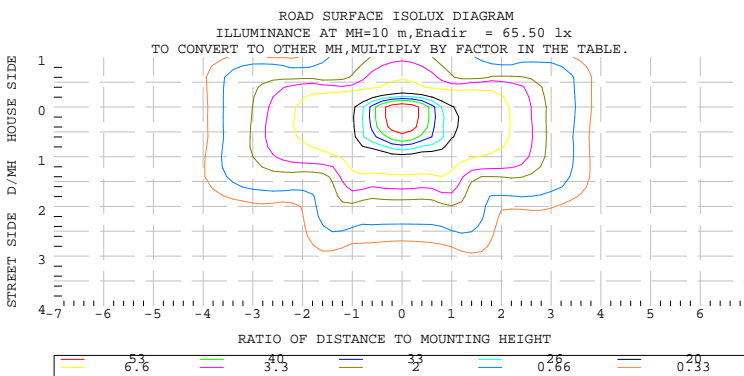
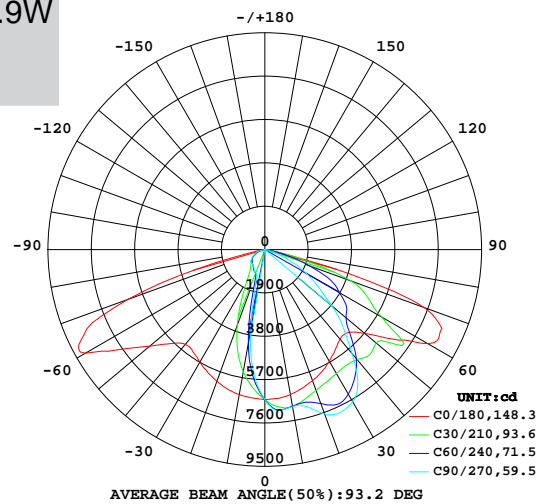


Through fine selection of body material and die casting method, mechanical strength is ensured even against worst of conditions while in the same time providing good heat dissipation maintaining LED life. High quality lenses offer sustained chromatic and photometric properties without compromising strength or hardness. Extra Shield of tempered glass adds even more strength plus chemical stability and invulnerability against extreme harsh weather conditions of highly polluted or high speed wind dust environments. Modular body design allows part exchange. An eye on the future design is a concept realized through a Large heat sink design covering even more than maximum power, along with large driver box allowing variety of devices including upcoming technologies like master control and communication through wireless channels

Photometric Characteristics

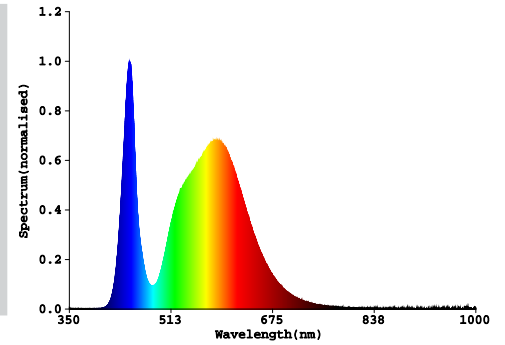
Light Source	SMD LEDs 3030 OSRAM
Total Luminous flux	17255 Lumen (+/-1%) @ 151.9W
Efficacy	113.58 Lm/W
SLI	18.659

High efficiency LEDs with precisely selected driver provide high efficacy. Perfectly selected Lenses provide best street lighting characteristics, uniform lighting along with no gaps in between the poles, no unnecessary spread losses and good surrounding illumination. Can easily achieve illumination class requirements for entire ME class along with A1-6 and S1-6 Classes for urban / suburban areas

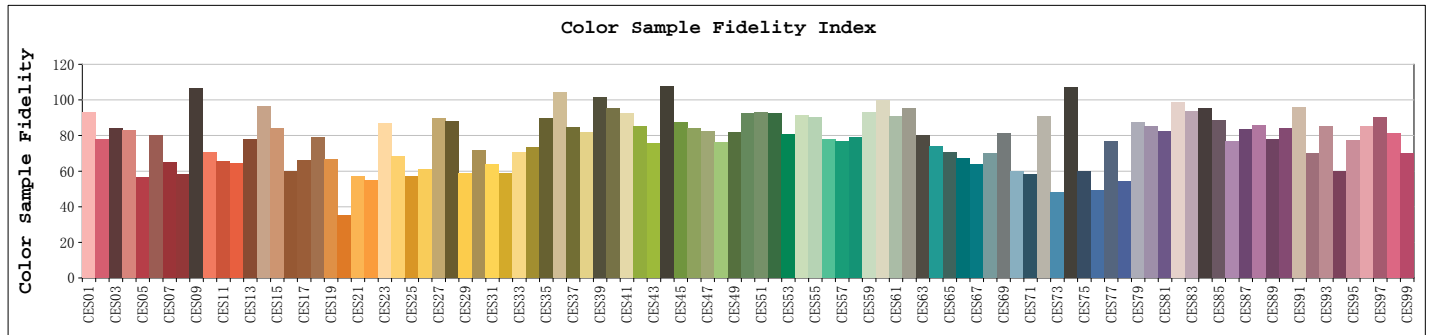
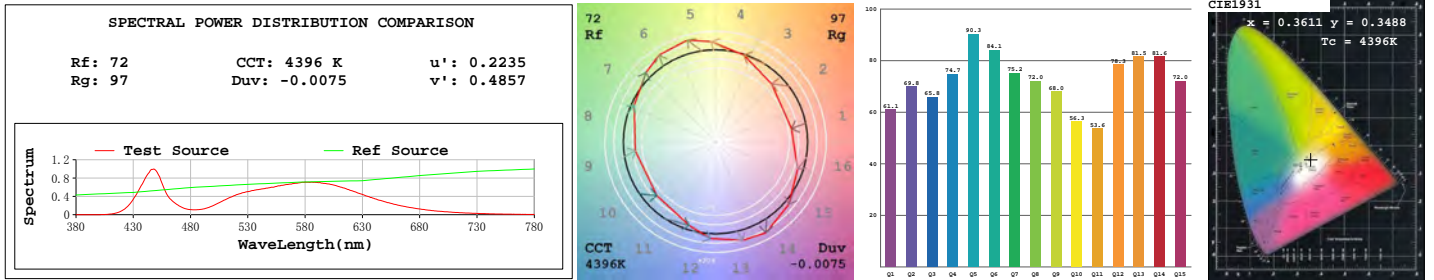


Color Spectrometry

Correlated Color temp.(CCT)	4396°K (Daylight)
Dominant Wavelength	585.3nm
Color Rendering index (Ra)	74.2
TM-30 Fidelity Index (Rf)	72
TM-30 Gamut Index (Rg)	97
CQS Qa	70.56
CQS TLCI	46
CQS	67.3

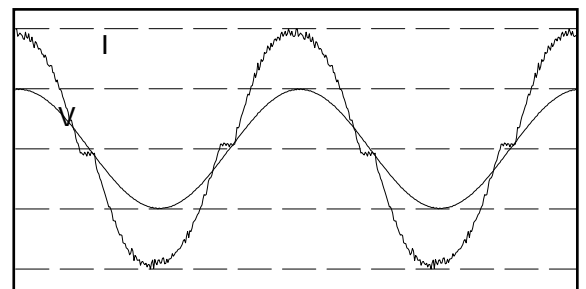


Owing to rich color nature of LEDs used, realistic color rendering is achieved offering correct and precise identification of colors while achieving eye comfort at the same time.



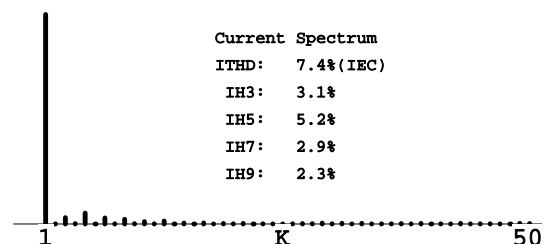
Electrical Parameters

Typical power supply	220VAC, 50Hz
Supply Limits	180-295VAC, 50/60Hz
Power	150W
Current	0.718 A (RMS)
Power Factor	0.991
Total Harmonic distortion (THDI)	7.4%
Withstand voltage	2KVAC IP/FG
Short circuit / over temperature	Protected, self restart
Physical Protection	Driver cover Electromechanical power supply interlock



Due to using high frequency PWM drivers, good electrical properties are achieved for both the grid (minimum distortion and continuous operation even against extreme conditions) and the LEDs (stable current supply independent of grid conditions).

Also running the LEDs on high frequency DC pulse wave provides best light vs. thermal performance and guarantees eye comfort (compared to classical gas discharge lighting running on grid frequency)



Art. no.	Type	Power	CCT
PACIFIC-SMD150240--	Pacific LED Street Luminaire	150W	4000°K



The Crown Jewel of Sega-M Street lighting solutions.
Super heavy duty performance for all applications

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

2. Industrial lighting

Hangars

LED High Bay 100W

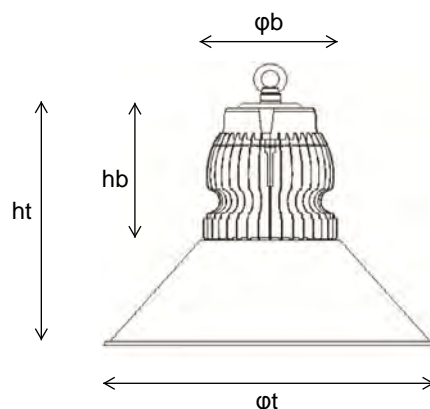
For workshops, garages
and small factories lighting

Designed for harsh industrial environment through fine selection of body material and sheet processing method providing best thermal performance and efficacy, high electrical stability against voltage variations, and clear view and realistic color rendering that fits all kinds of industry

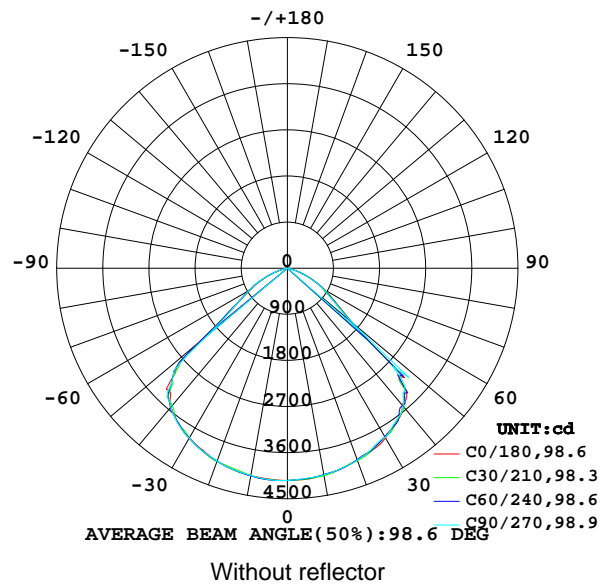
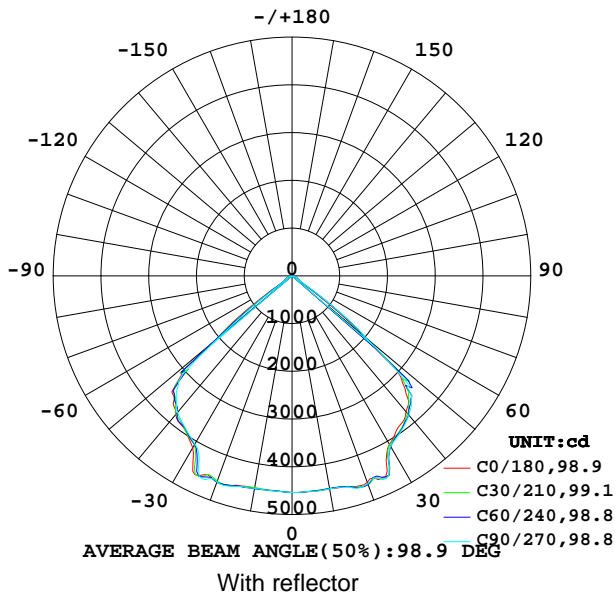


100W 103Lm/W 6000°K IP65

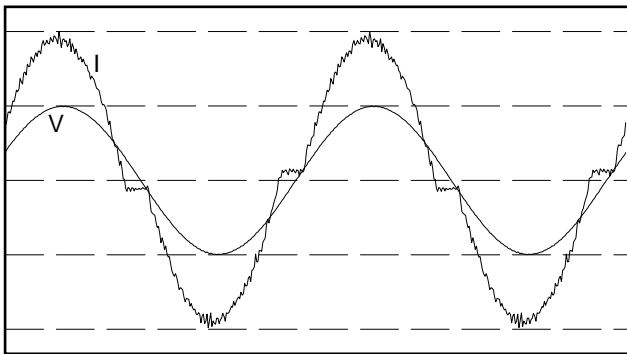
Physical	
Mass	3.4kg (2.6kg without reflector)
Dimensions	φt 450mm * ht 360mm, φb 200mm * hb 200mm (without reflector)
Body	Electrostatically coated aluminum laminations
Reflector	Electrostatically coated Press formed aluminum sheet
Emitting surface	Borosilicate Glass lens (High temp. resistant)
Protection	IP65, IK08
Mounting	Pendent, M10 Eye bolt (removable)
Photometric	
Light Source	SMD LEDs 3030
Total Luminous flux	10300 Lumen (+/-1%) @ 100W
Efficacy	103 Lm/W
Spread angle	98°
Spectrometric	
CCT	6878°K
CRI	83.9
Electrical	
Power supply	220VAC, 50Hz, (Max. Limits: 110-305VAC, 50/60Hz)
Power	100W
Current	0.438 A (RMS)
Power Factor	0.984
THDI	12%



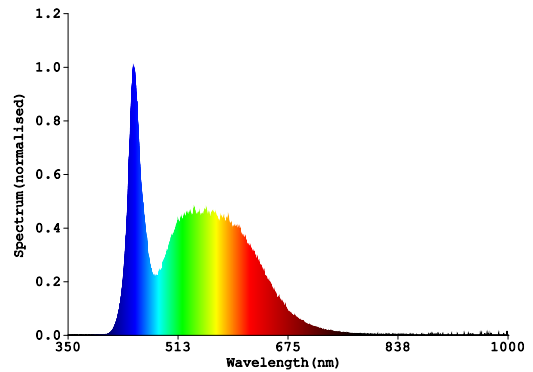
Polar radiation distribution



Electrical oscilloscopy



Color Spectrum



Art. no.	Type	Power	CCT
FFL-SMD100260--	LED High bay	100W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED High Bay 160W

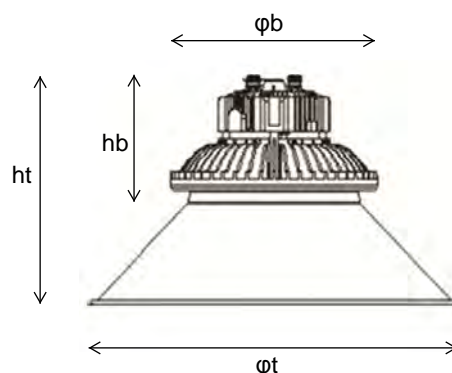
For manufacturing plants
and factories lighting

Designed for harsh industrial environment through fine selection of body material and die casting method providing best thermal performance and efficacy, high electrical stability against voltage variations, and clear view and realistic color rendering that fits all kinds of industry

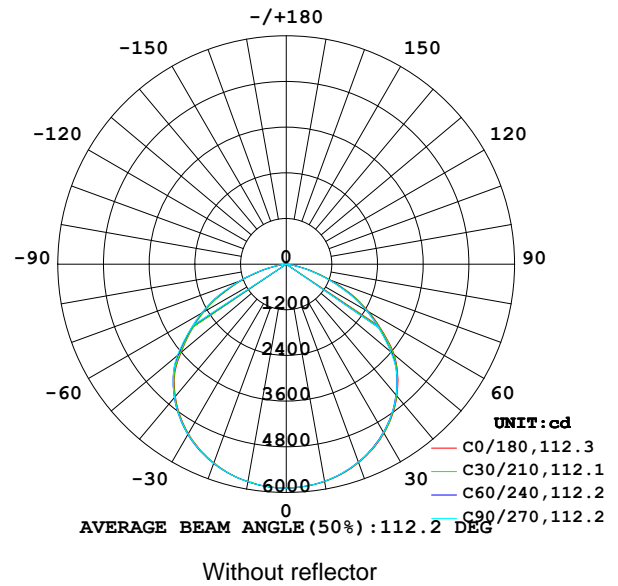
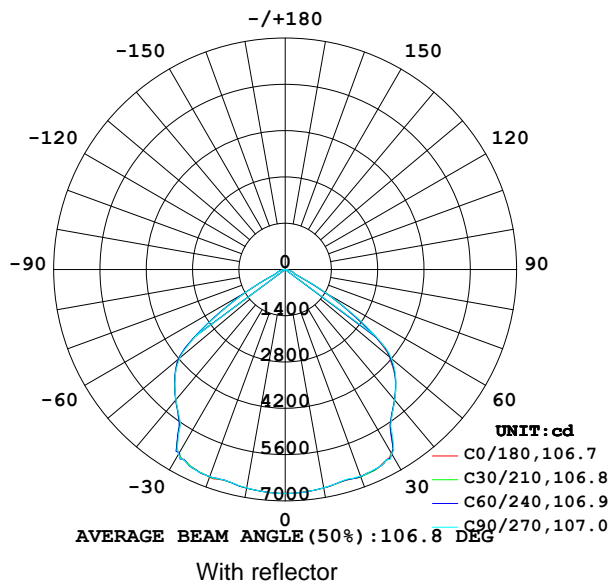


160W 100Lm/W 6000°K IP65

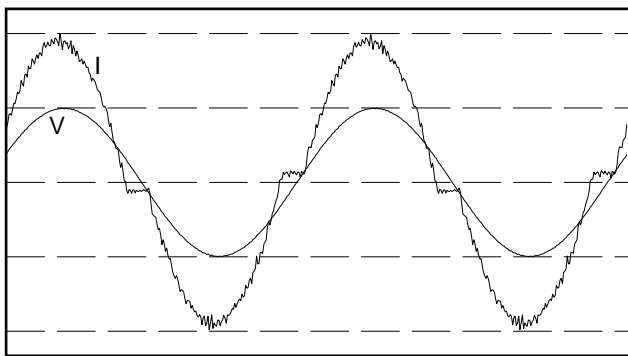
Physical	
Mass	3.4kg (2.6kg without reflector)
Dimensions	φt 475mm * ht 295mm, φb 280mm * hb 145mm (without reflector)
Body	Electrostatically coated die cast aluminum
Reflector	Electrostatically coated Press formed aluminum sheet
Emitting surface	Clear glass
Protection	IP65, IK08
Mounting	Pendent, M10 Eye bolt (removable)
Photometric	
Light Source	SMD LEDs 3030
Total Luminous flux	16000 Lumen (+/-1%) @ 160W
Efficacy	100 Lm/W
Spread angle	106° with reflector, 112.2° without reflector
Spectrometric	
CCT	6801°K
CRI	84.5
Electrical	
Power supply	220VAC, 50Hz, (Max. Limits: 110-305VAC, 50/60Hz)
Power	160W
Current	0.755 A (RMS)
Power Factor	0.977
THDI	11%



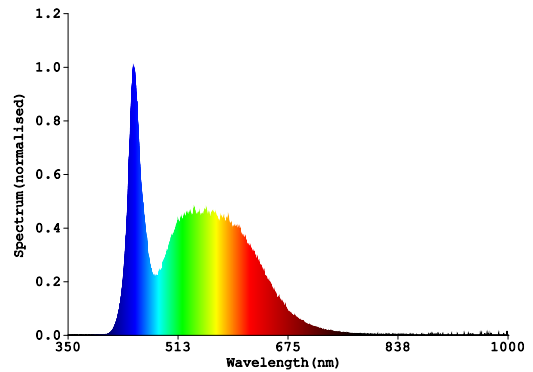
Polar radiation distribution



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
HFL-SMD160260--	LED High bay	160W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED High Bay 200W

For manufacturing plants
and factories lighting

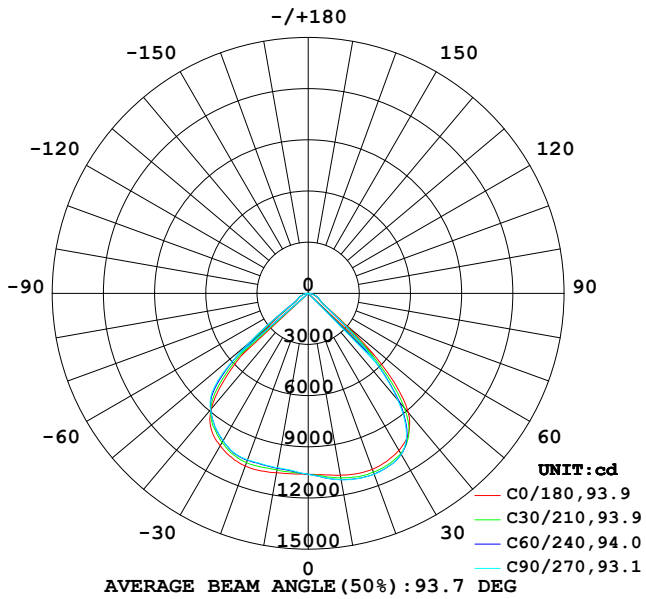
Designed for harsh industrial environment through fine selection of body material and die casting method providing best thermal performance and efficacy, high electrical stability against voltage variations, and clear view and realistic color rendering that fits all kinds of industry

200W 113Lm/W 6000°K IP65

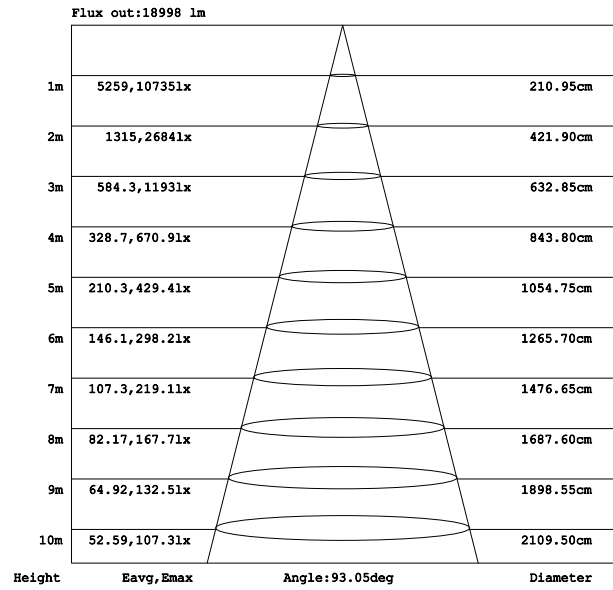
Physical	
Mass	5.025kg
Dimensions	φ 390mm * h 100mm
Body	Electrostatically coated die cast aluminum
Reflector	None
Emitting surface	PMMA Lenses
Protection	IP65, IK08
Mounting	Pendent, M12 Eye bolt (removable)
Photometric	
Light Source	SMD LEDs
Total Luminous flux	22451 Lumen (+/-1%) @ 197.8W
Efficacy	113.5 Lm/W
Spread angle	93.7°
Spectrometric	
CCT	5579°K
CRI	84.6
Electrical	
Power supply	220VAC, 50Hz, (Max. Limits: 110-305VAC, 50/60Hz)
Power	200W
Current	0.906 A (RMS)
Power Factor	0.994
THDI	3.7%



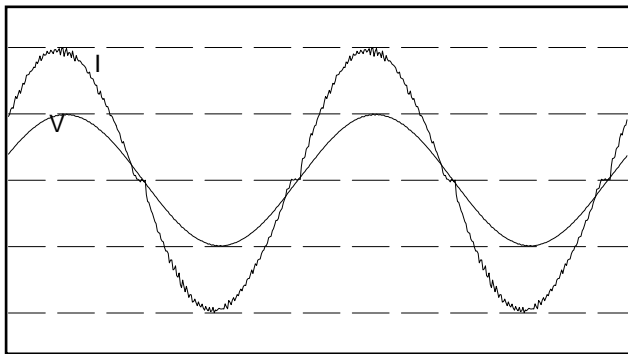
Polar radiation distribution



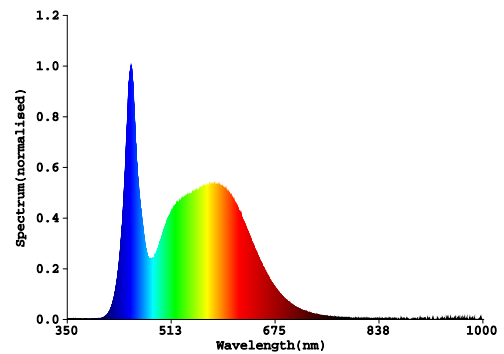
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SPHFL-SMD200260--	LED High bay	200W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

Low Ceilings

Weatherproof tube luminaire

For manufacturing plants and factories lighting

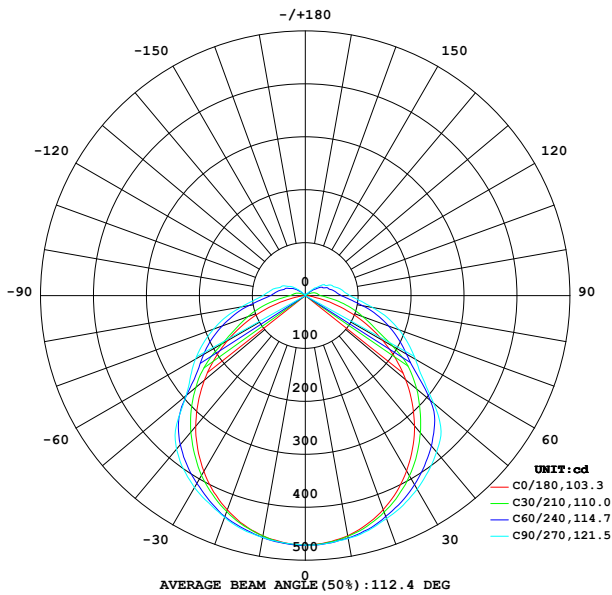
Body made of Acrylonitrile butadiene styrene (ABS) and diffuser made of polycarbonate (PC) offer great stability in wide range of operating temperature. They also offer rigidity and chemical stability (against mineral salts, acids, alkalis and alcohols). Body height is sufficient for inserting additional components (i.e. fluorescent components or emergency configuration components; batteries, chargers etc.) Highly efficient clamps offer durability and easy use. Internal drop cords and hinge clamps allow removing components for maintenance without the need to disassemble the whole body.

G13 Tube base (single/dual) 60/120cm IP65

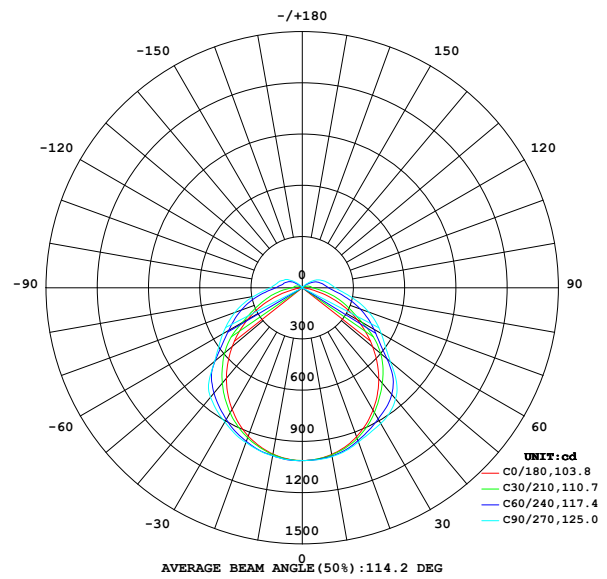
Physical	
Mass	0.85kg (60cm) / 1.675kg (120cm)
Dimensions	L 1270 * W 110 * h 70mm (120cm), L 655 * W 110 * h 70mm (60cm)
Body	ABS, with stainless steel hinge clamps
Reflector	Electrostatically coated sheet steel (white)
Diffuser	Semi-prismatic Poly carbonate
Protection	IP65, IK08
Mounting	Surface mounted (wall/ceiling) or pendent with M4/M6 Fischer screws
Running temp.	-20° to 50°C
Photometric	
Light Source	1 or 2 * G13 T8 Tubes
LOR	81% (Based on 9W 60cm/ 18W 120cm T8 LED Tubes w/ half circle spread)
Spread angle	113°
Spectrometric	
	As per installed tube(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 25W/60cm tube, 50W/120cm tube



Polar radiation distribution



2 * typical T8 60cm 9W
100 Lm/W LED tubes w/
half circle spread



2 * typical T8 120cm 18W
100 Lm/W LED tubes w/
half circle spread

Art. no.	Type*	Base	Var.
WTT1S-G13000000--	Weatherproof G13 Tube Luminaire 1*60cm	1*G13	None
WTT2S-G13000000--	Weatherproof G13 Tube Luminaire 2*60cm	2*G13	None
WTT1M-G13000000--	Weatherproof G13 Tube Luminaire 1*120cm	1*G13	None
WTT2M-G13000000--	Weatherproof G13 Tube Luminaire 2*120cm	2*G13	None

* All models are LED tube connection ready (no ballasts, power supply L/N to two tips), enough space exists for adding Li-ion battery powered non-maintained emergency modules.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations. Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

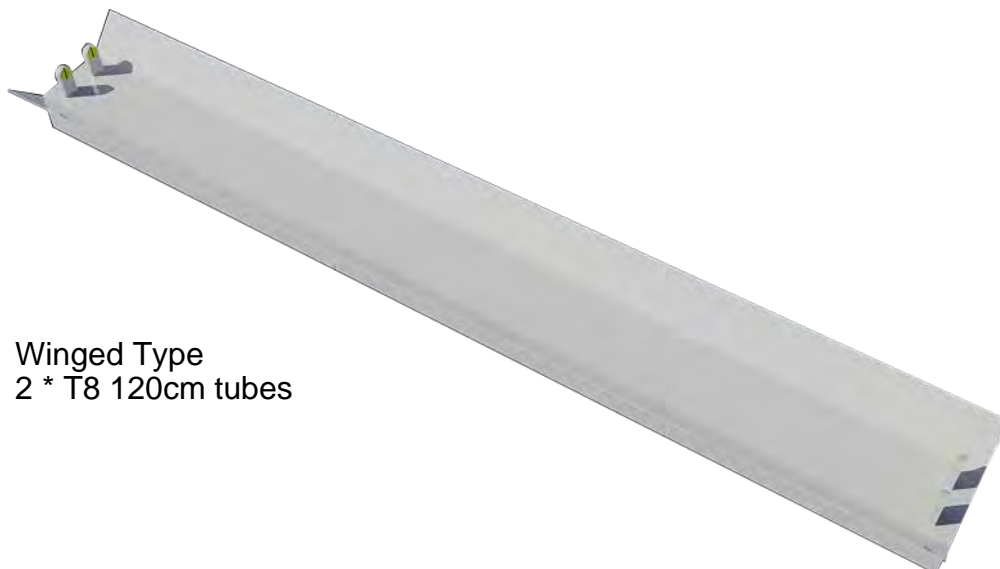
Workshop tube luminaire

For manufacturing plants and factories lighting

The clear cut solution for industrial luminaire in moderate/non polluted environment. Body height is sufficient for inserting additional components (i.e. fluorescent components or emergency configuration components; batteries, chargers etc.) Internal drop cords allow removing components for maintenance without the need to disassemble the whole body.

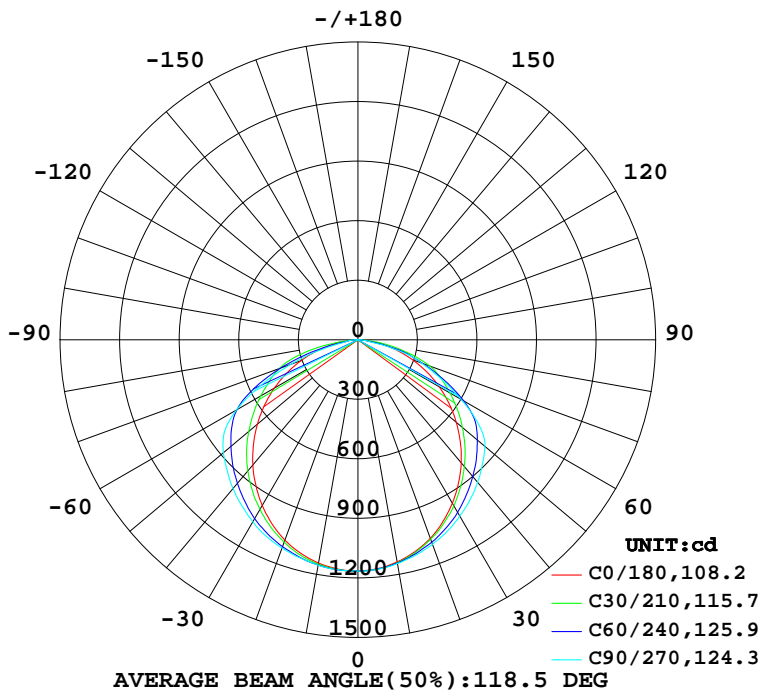
G13 Tube base (1-4 tubes) 60/120cm IP20

Physical	
Mass	1.5-4kg (per size)
Dimensions	L 640/1240mm (60/120cm), W 70/100/150/200mm (1-4 tubes), H 100/183mm (Bare/Winged)
Body	Electrostatically coated sheet steel (white)
Diffuser	None (Open)
Protection	IP20
Mounting	Surface mounted (wall/ceiling) or pendent with M4/M6 Fischer screws
Photometric	
Light Source	1-4 * G13 T8 Tubes
LOR	89.6% (Based on 2*18W 120cm G13 T8 LED Tubes w/ half circle spread)
Spread angle	118.5°
Spectrometric	
	As per installed tube(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 25W/60cm tube, 50W/120cm tube



Winged Type
2 * T8 120cm tubes

Polar radiation distribution



Winged Type
2 * typical T8 120cm 18W
100 Lm/W LED tubes w/
half circle spread

Art. no.	Type*	Base	Var.
SH1S-G13000000--	Workshop luminaire 60cm	1*G13	Bare
SH2S-G13000000--	Workshop luminaire 60cm	2*G13	Bare
SH3S-G13000000--	Workshop luminaire 60cm	3*G13	Bare
SH4S-G13000000--	Workshop luminaire 60cm	4*G13	Bare
SHED1S-G13000000--	Workshop luminaire 60cm	1*G13	Winged
SHED2S-G13000000--	Workshop luminaire 60cm	2*G13	Winged
SHED3S-G13000000--	Workshop luminaire 60cm	3*G13	Winged
SHED4S-G13000000--	Workshop luminaire 60cm	4*G13	Winged
SH1M-G13000000--	Workshop luminaire 120cm	1*G13	Bare
SH2M-G13000000--	Workshop luminaire 120cm	2*G13	Bare
SH3M-G13000000--	Workshop luminaire 120cm	3*G13	Bare
SH4M-G13000000--	Workshop luminaire 120cm	4*G13	Bare
SHED1M-G13000000--	Workshop luminaire 120cm	1*G13	Winged
SHED2M-G13000000--	Workshop luminaire 120cm	2*G13	Winged
SHED3M-G13000000--	Workshop luminaire 120cm	3*G13	Winged
SHED4M-G13000000--	Workshop luminaire 120cm	4*G13	Winged

* All models are LED tube connection ready (no ballasts, power supply L/N to two tips), enough space exists for adding Li-ion battery powered non-maintained emergency modules.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED Weatherproof luminaire

For manufacturing plants
and factories lighting

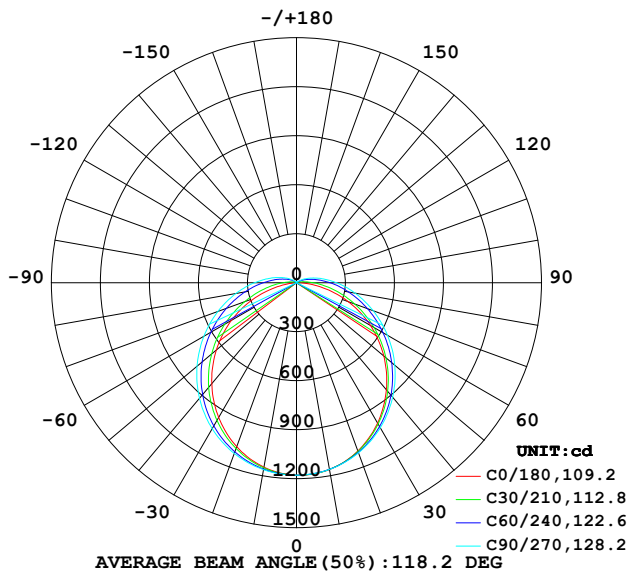
Body and diffuser made of polycarbonate (PC) offer great stability in wide range of operating temperature. They also offer rigidity and chemical stability (against mineral salts, acids, alkalis and alcohols). Body height is sufficient for inserting additional components (i.e. emergency configuration components; batteries, chargers etc.) Highly efficient clamps offer durability and easy use. Internal drop cords and hinge clamps allow removing components for maintenance without the need to disassemble the whole body.

33W 108Lm/W 4000°K IP65

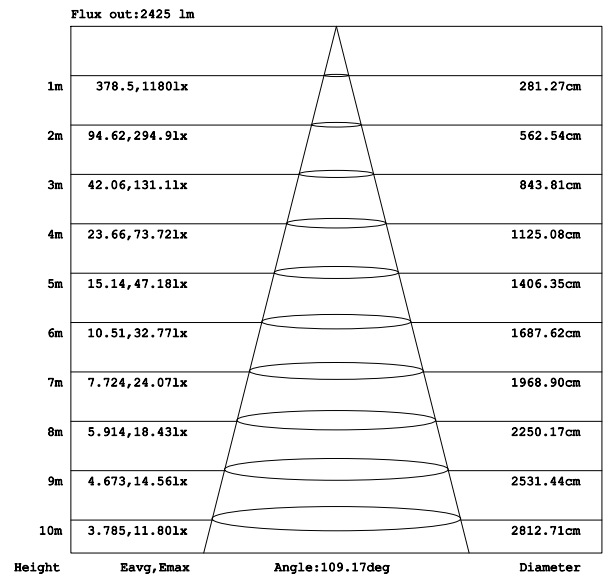
Physical	
Mass	1.415kg
Dimensions	L 1200 * W 100 * h 60mm
Body	Poly carbonate
Diffuser	Milky poly carbonate
Protection	IP65 IK08
Mounting	Surface mounted (wall/ceiling) or pendent with M4/M6 Fischer screws
Running temp.	-20° to 50°C
Photometric	
Light Source	SMD LEDs
Total Luminous flux	3987 Lumen (+/-1%) @ 36.9W
Efficacy	108.08 Lm/W
Spread angle	118.2°
Spectrometric	
CCT	4062°K
CRI	84.1
Electrical	
Power supply	220VAC, 50Hz
Power	33W
Current	0.173 A (RMS)
Power Factor	0.967
THDI	13.8%



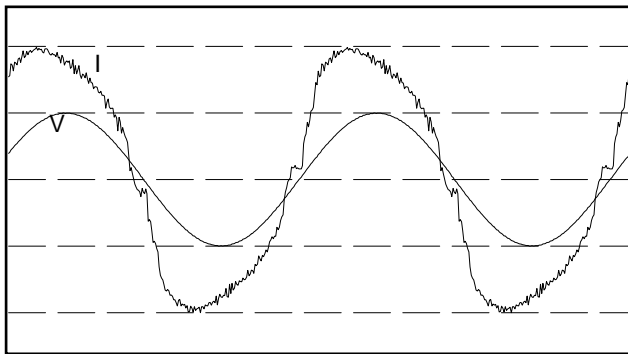
Polar radiation distribution



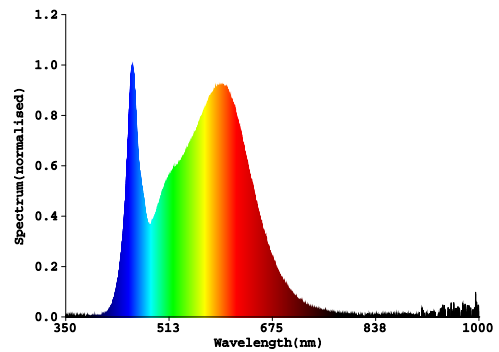
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
WTT2M-SMD033240--	LED Weatherproof luminaire 120cm	33W	4000°K

Enough space exists for adding Li-ion battery powered non-maintained emergency modules.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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3. Indoor Lighting

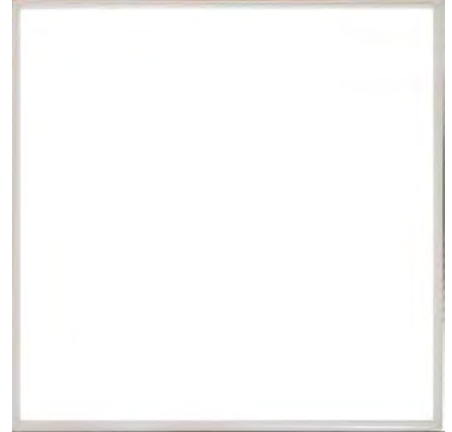
Main Lighting

LED Panels

Recessed LED Panel (Matrix)

For office space and general indoors lighting

Built to replace conventional fluorescent panels with shutters, with even better results. Through milky diffuser glare is eliminated and high efficacy due to high quality LEDs and direct radiation is a foretold result.

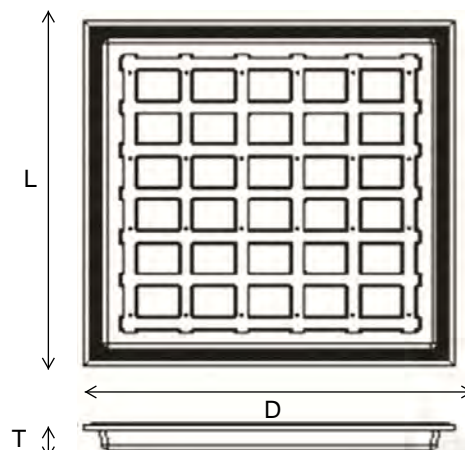


40-45W 100Lm/W IP42

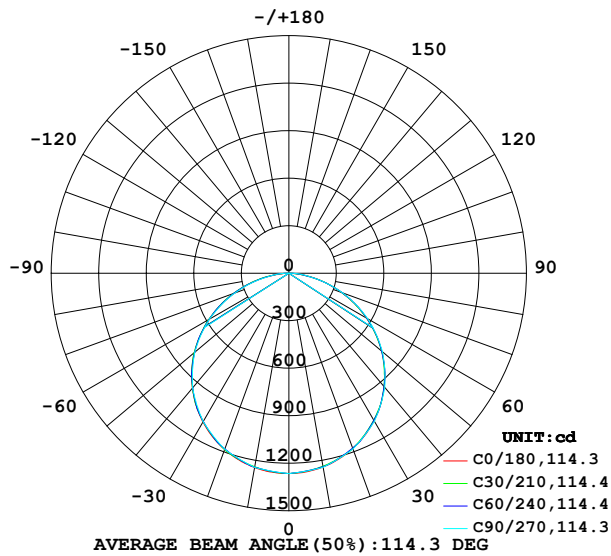
Physical	
Mass	3.4kg
Dimensions	D 595 * L 595mm (Luminous area 540*540mm) * T 50mm
Body	Electrostatically coated press formed sheet steel + aluminum section frame
Diffuser	Polystyrene - Milky
Protection	IP42
Mounting	False ceiling recessed (Adapter for concrete ceiling available)
Photometric	
Light Source	SMD LEDs
Total Luminous flux	4225 Lumen (+/-1%) @ 42W
Efficacy	100 Lm/W
Spread angle	114.3°
Spectrometric	
CCT	4000/6000°K
CRI	74.6
Electrical	
Power supply	220VAC, 50Hz
Power	40-45W (45W default)
Current	0.211 A (RMS)
Power Factor	0.97
THDI	9.8%



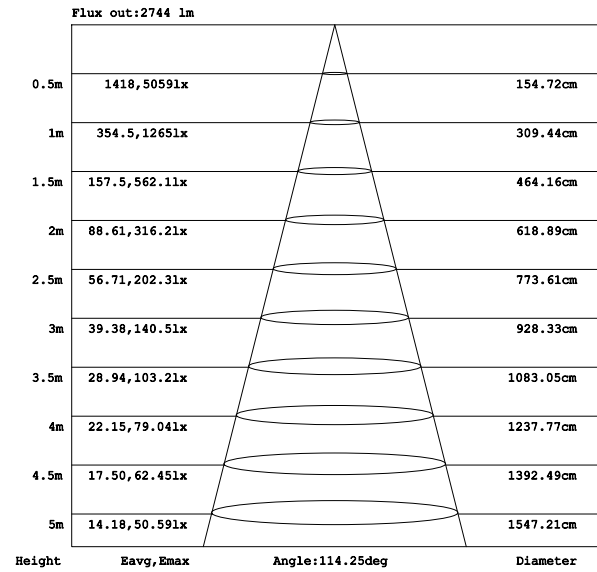
Backside



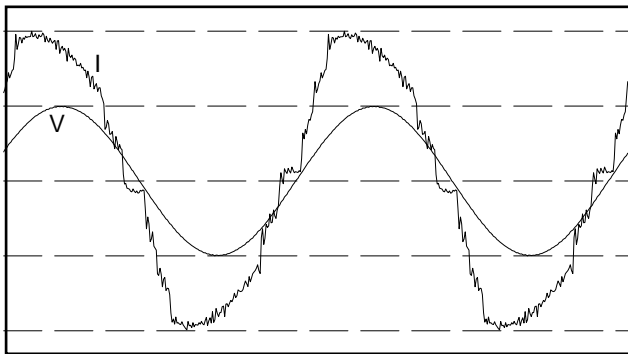
Polar radiation distribution



Horizontal illuminance



Electrical oscilloscopy



Art. no.	Type	Power	CCT
MATRIX-SMD040240--	LED Panel Matrix (recessed)*	40W	4000°K
MATRIX-SMD040260--	LED Panel Matrix (recessed)*	40W	6000°K
MATRIX-SMD045240--	LED Panel Matrix (recessed)*	45W	4000°K
MATRIX-SMD045260--	LED Panel Matrix (recessed)*	45W	6000°K

* Adapter for concrete ceiling also available (electrostatically coated sheet steel)

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

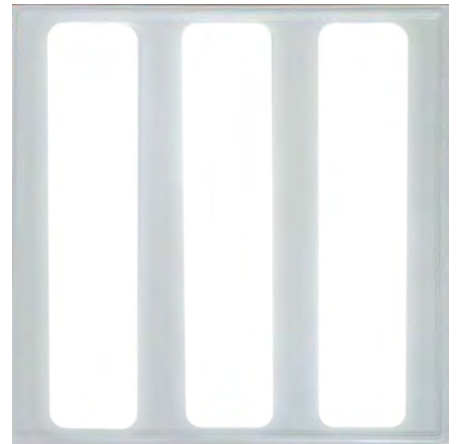
Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

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Recessed LED Panel (Grill)

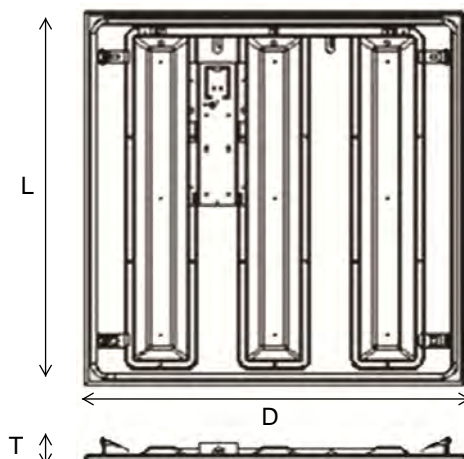
For office space and general indoors lighting

Built to replace conventional fluorescent panels with shutters, with even better results. Through milky diffuser glare is eliminated and high efficacy due to high quality LEDs and direct radiation is a foretold result.

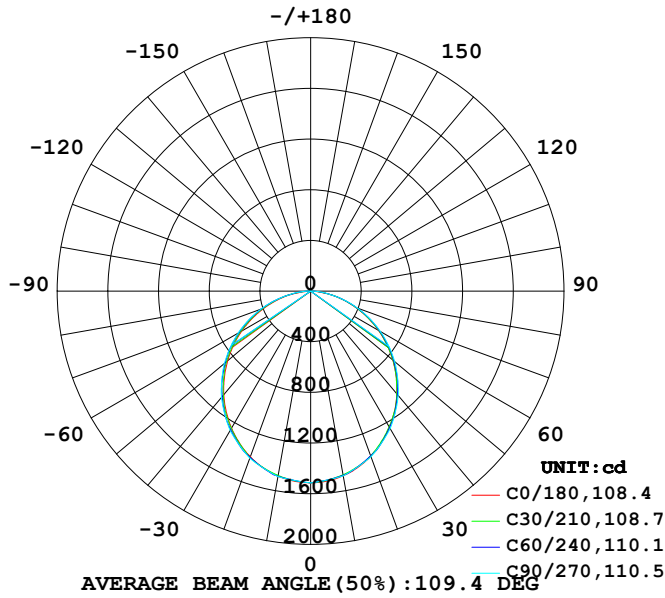


40W 105Lm/W 6000°K IP20

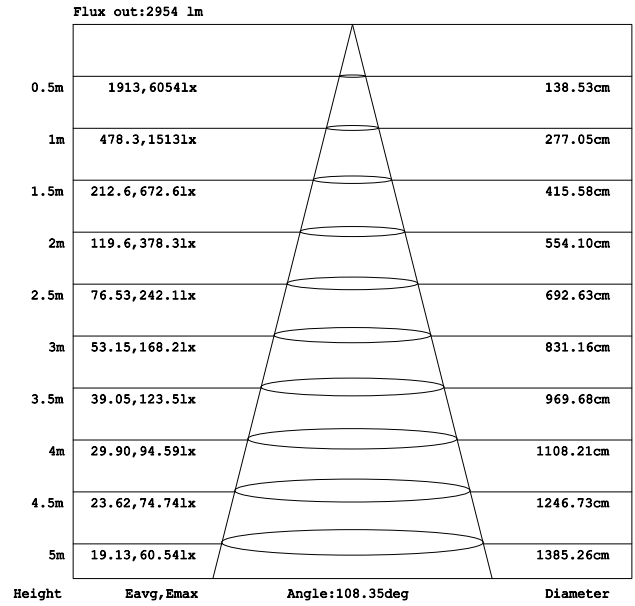
Physical	
Mass	3.2kg
Dimensions	D 595 * L 595mm (Luminous area = 3*540*110mm) * T 41mm
Body	Electrostatically coated press formed sheet steel
Diffuser	PET - Milky
Protection	IP20
Mounting	False ceiling recessed (Adapter for concrete ceiling available)
Photometric	
Light Source	SMD LEDs
Total Luminous flux	4186 Lumen (+/-1%) @ 40W
Efficacy	104.65 Lm/W
Spread angle	109.4°
Spectrometric	
CCT	6584°K
CRI	83
Electrical	
Power supply	220VAC, 50Hz
Power	40W
Current	0.185 A (RMS)
Power Factor	0.972
THDI	7%



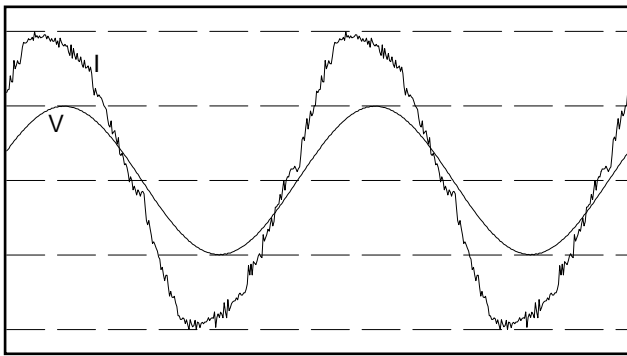
Polar radiation distribution



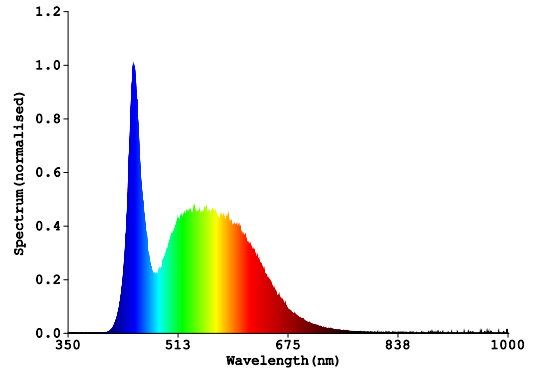
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Art. no.

GRILL-SMD040260--

Type

LED Panel Grill (recessed)*

Power

40W

CCT

6000°K

* Adapter for concrete ceiling also available (electrostatically coated sheet steel)

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

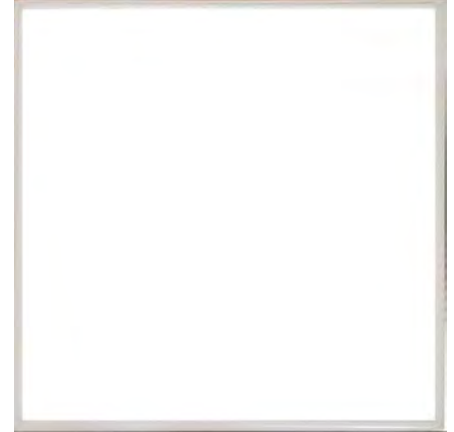
Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

Recessed LED Panel (Slim)

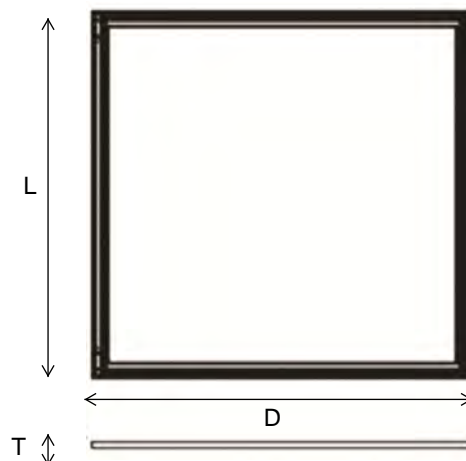
For office space and general indoors lighting

Built to replace conventional fluorescent panels with shutters, with even better results. Through milky diffuser glare is eliminated and high efficacy due to high quality LEDs and direct radiation is a foretold result.

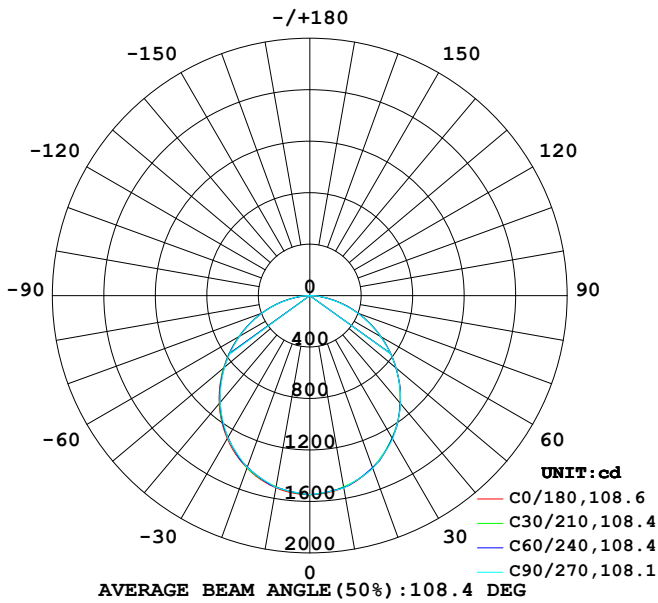


40-45W 92Lm/W 6000°K IP42

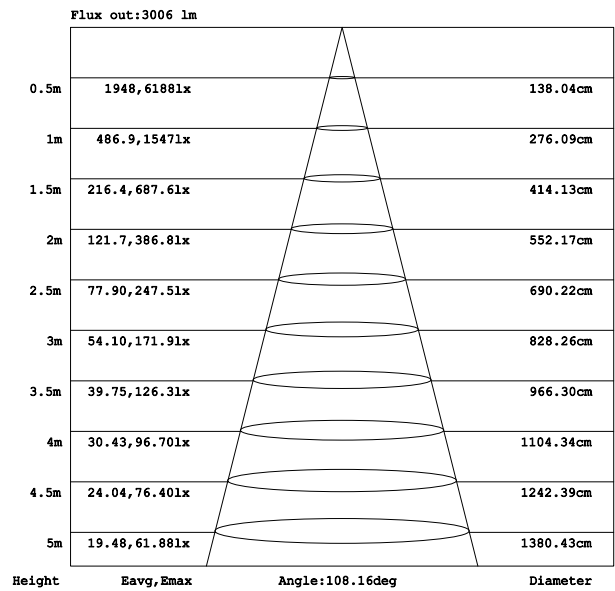
Physical	
Mass	3.65kg
Dimensions	D 595 * L 595mm (Luminous area 540*540mm) * T 13mm
Body	Aluminum section frame + galvanized sheet steel back
Diffuser	Polycarbonate - Milky
Protection	IP42
Mounting	False ceiling recessed (Adapter for concrete ceiling available)
Photometric	
Light Source	SMD LEDs
Total Luminous flux	4210 Lumen (+/-1%) @ 46W
Efficacy	91.5 Lm/W
Spread angle	108.4°
Spectrometric	
CCT	4000/6000°K
CRI	82.8
Electrical	
Power supply	220VAC, 50Hz
Power	45W (45W default)
Current	0.215 A (RMS)
Power Factor	0.97
THDI	8.6%



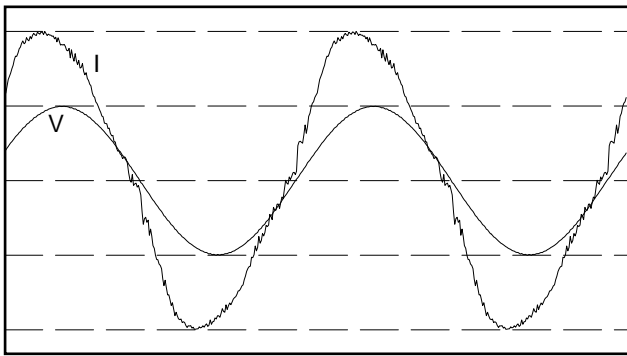
Polar radiation distribution



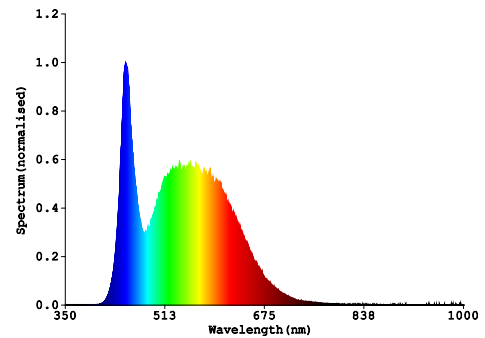
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SLIM-SMD040260--	LED Panel Slim (recessed)*	40W	6000°K
SLIM-SMD045260--	LED Panel Slim (recessed)*	45W	6000°K

* Adapter for concrete ceiling also available (electrostatically coated sheet steel)

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

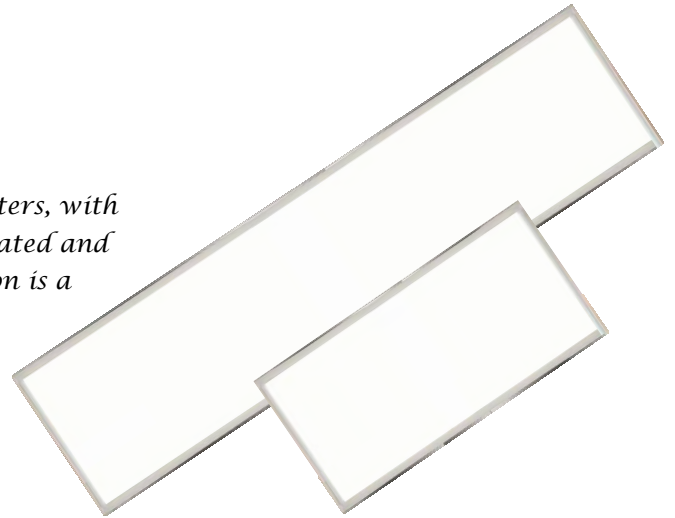
Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

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Recessed LED Panel (Long)

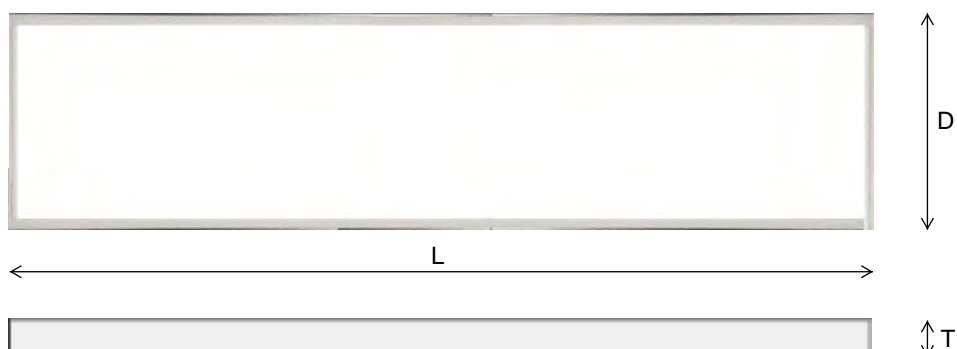
For office space and general indoors lighting

Built to replace conventional fluorescent panels with shutters, with even better results. Through milky diffuser glare is eliminated and high efficacy due to high quality LEDs and direct radiation is a foretold result.

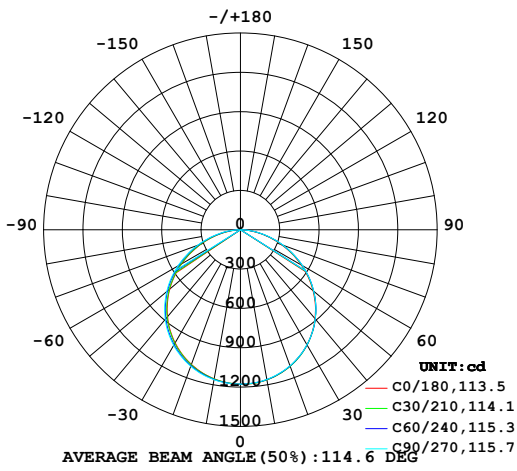
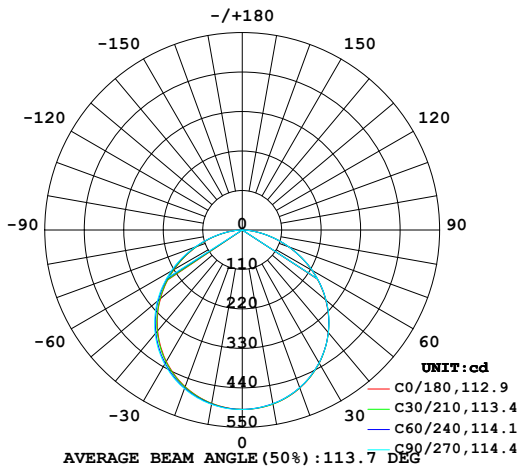


20/45W 100Lm/W IP42

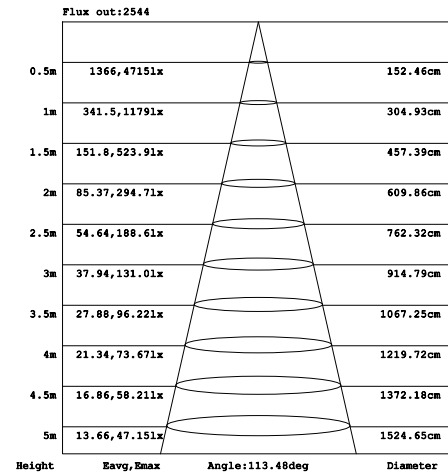
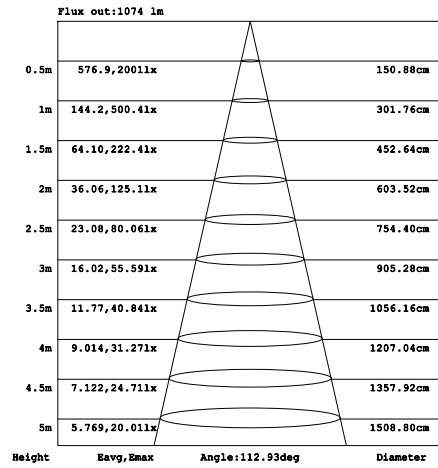
Physical	
Mass	4.79 / 3.4kg (Size1 / Size2)
Dimensions	L 1195 * D 295mm (Luminous area 1140*240mm) * T 50mm L 595 * D 295mm(Luminous area 540*240mm) * T 50mm
Body	Electrostatically coated press formed sheet steel + aluminum section frame
Diffuser	Polystyrene - Milky
Protection	IP42
Mounting	False ceiling recessed (Adapter for concrete ceiling available)
Photometric	
Light Source	SMD LEDs
Total Luminous flux	2010/4204 Lumen (+/-1%) @ 20/42W (Size1 / Size2)
Efficacy	100.1 Lm/W
Spread angle	114°
Spectrometric	
CCT	4000/6000°K
CRI	74.6
Electrical	
Power supply	220VAC, 50Hz
Power	20-45W (45W default)
Current	0.102/0.201 A (RMS)
Power Factor	0.97
THDI	10%



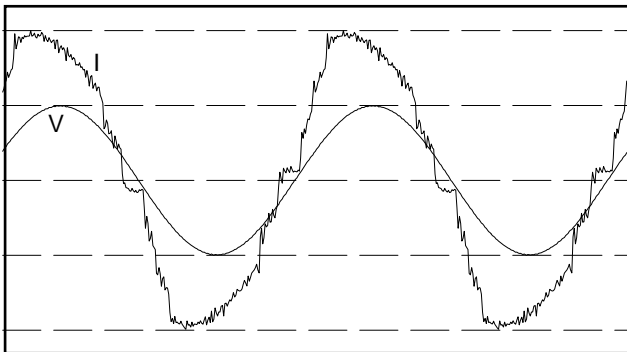
Polar radiation distribution



Horizontal illuminance



Electrical oscilloscopy



* Adapter for concrete ceiling also available (electrostatically coated sheet steel)

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Down lights

Recessed LED Down light (Lens based)

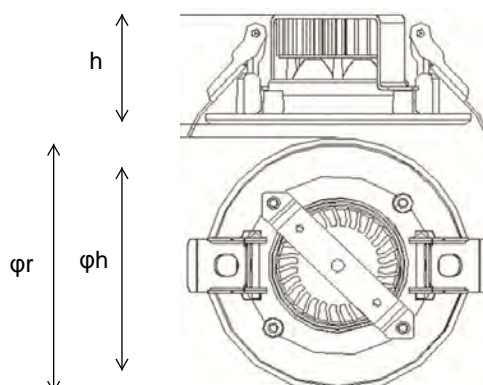
For office space and
general indoors lighting

Highly efficient replacement to conventional down lights, saving both power and space. Miniature size and clamp fixation allows easy installation and maintenance even with confined space above false ceiling.

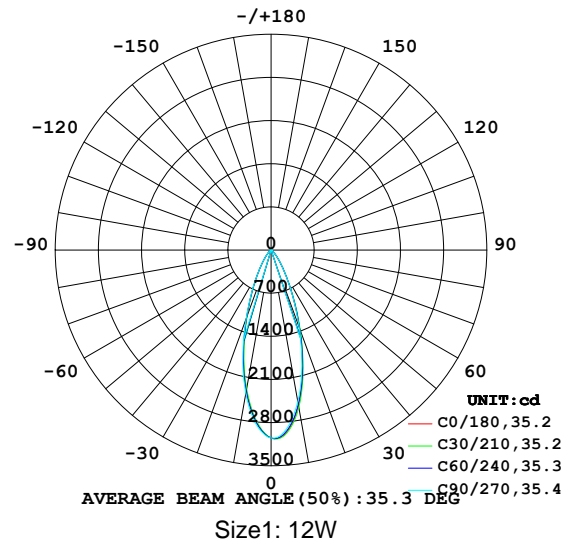
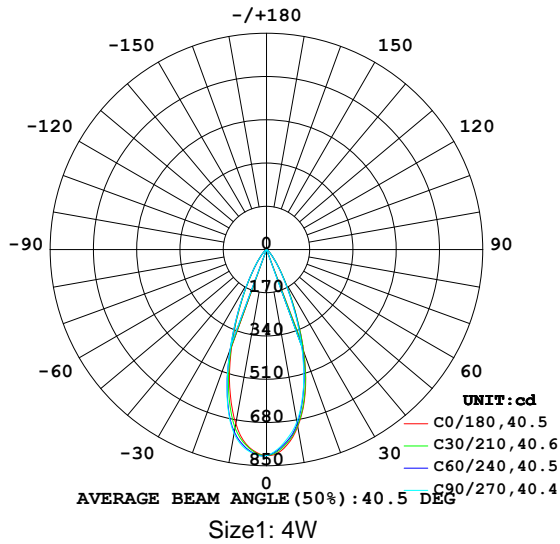


4/12W 100Lm/W 6000°K IP20

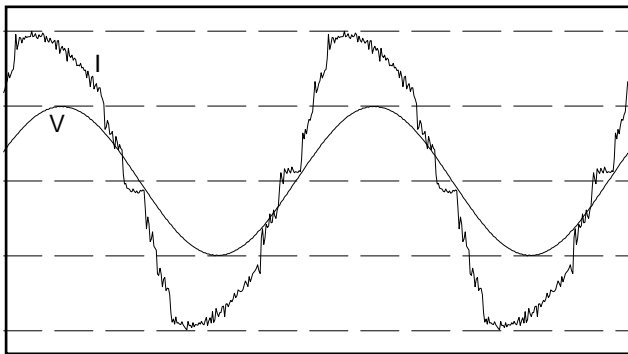
Physical	
Mass	Size1: 0.195kg, Size2: 0.48kg
Dimensions	Size1: ϕ_r 97mm, ϕ_{hole} 80mm * h 42mm (Up to 4W), Size2: ϕ_r 144mm, ϕ_{hole} 126mm * h 65 mm (Up to 12W)
Body	Electrostatically coated die cast aluminum ring + Anodized aluminum section heat sink
Emitting surface	PMMA Lenses
Protection	IP20 (IP54 Front)
Mounting	False ceiling recessed, spring-loaded clamp
Photometric	
Light Source	SMD LEDs
Total Luminous flux	425 Lumen (Size1) / 1417 Lumen (Size2) (+/-1%)
Efficacy	100-110 Lm/W
Spread angle	40.5° (Size1) / 35.3° (Size2)
Spectrometric	
CCT	5528°K
CRI	73.7
Electrical	
Power supply	220VAC, 50Hz
Power	4/12W
Current	0.041-0.056 A (RMS)
Power Factor	0.97
THDI	8.6%



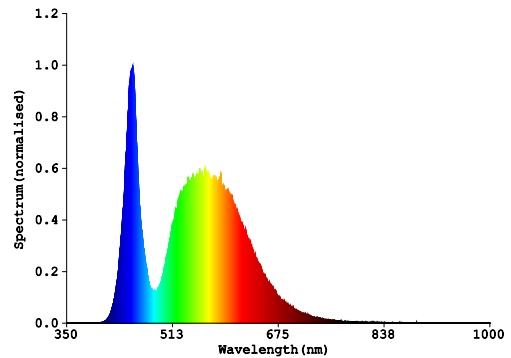
Polar radiation distribution



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SLMD10-SMD004230--	LED Down light SMD (size1)	4W	3000°K
SLMD10-SMD004240--	LED Down light SMD (size1)	4W	4000°K
SLMD10-SMD004260--	LED Down light SMD (size1)	4W	6000°K
SLMD15-SMD012230--	LED Down light SMD (size2)	12W	3000°K
SLMD15-SMD012240--	LED Down light SMD (size2)	12W	4000°K
SLMD15-SMD012260--	LED Down light SMD (size2)	12W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Surface mounted LED Down light (Lens based)

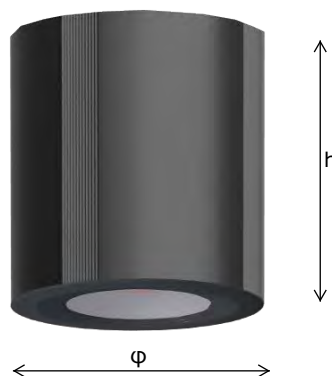
For office space and
general indoors lighting

Highly efficient replacement to conventional down lights, saving both power and space. Size and configuration allow easy installation and maintenance. Decorative shape fits with modern architecture.

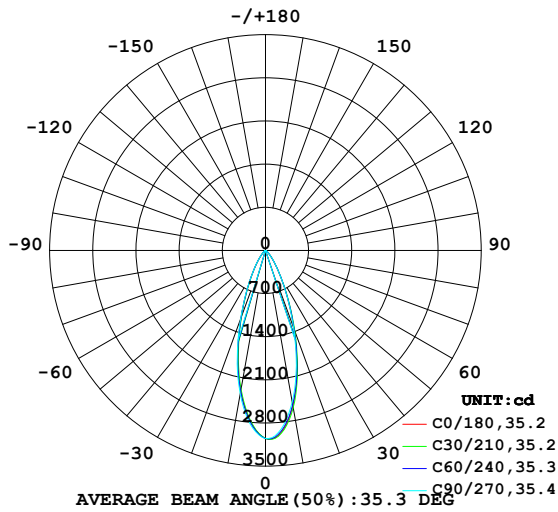


12W 110Lm/W 6000°K IP54

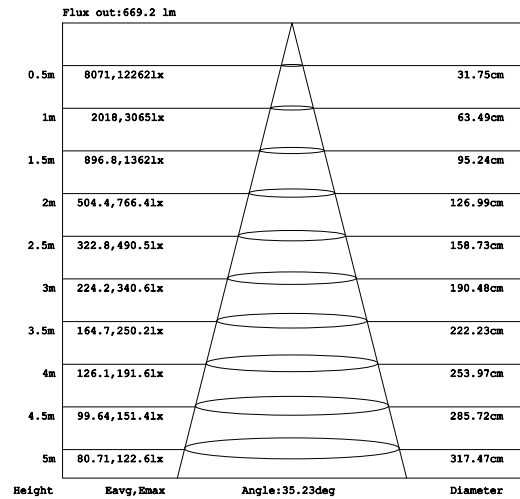
Physical	
Mass	1.55kg
Dimensions	φ136 * h150mm
Body	Electrostatically coated die cast aluminum ring + extruded aluminum tube
Emitting surface	PMMA Lenses
Protection	IP54
Mounting	M4/M6 Fischer screws, surface / pendent with tension cable mounted
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1417 Lumen (+/-1%)
Efficacy	110 Lm/W
Spread angle	35.3°
Spectrometric	
CCT	5528°K
CRI	73.7
Electrical	
Power supply	220VAC, 50Hz
Power	12W
Current	0.056 A (RMS)
Power Factor	0.97
THDI	8.6%



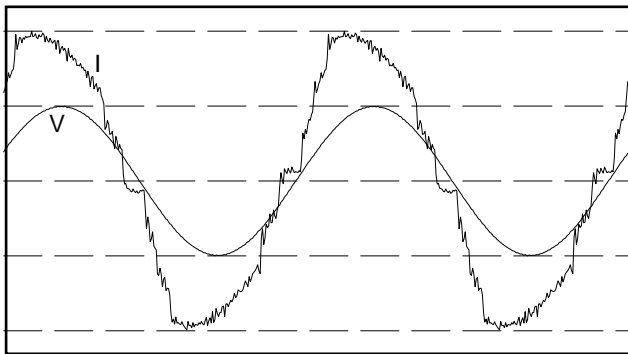
Polar radiation distribution



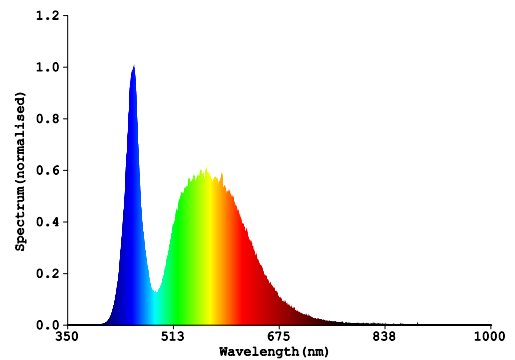
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Recessed LED Down light (reflector/diffuser based)

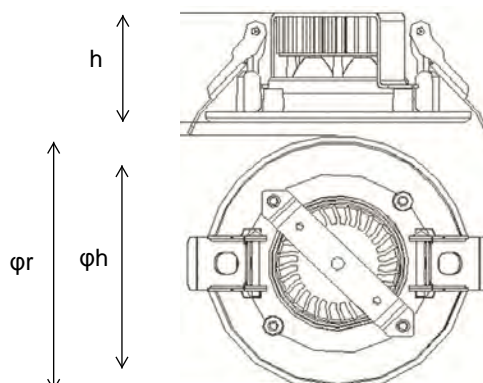
For office space and
general indoors lighting

Highly efficient replacement to conventional down lights, saving both power and space. Miniature size and clamp fixation allows easy installation and maintenance even with confined space above false ceiling.

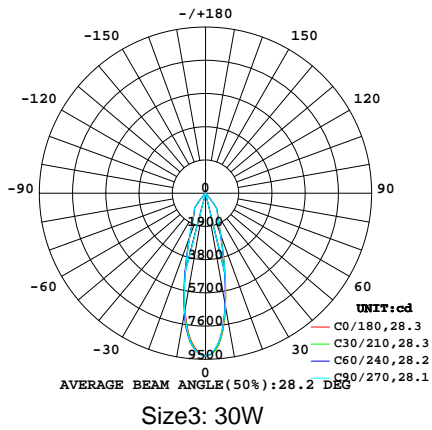
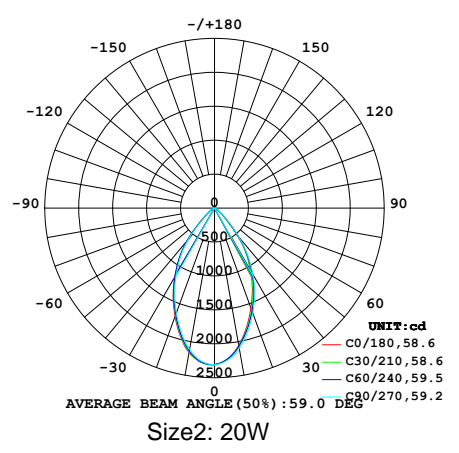
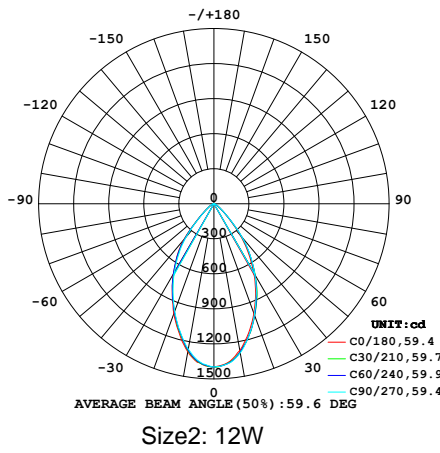
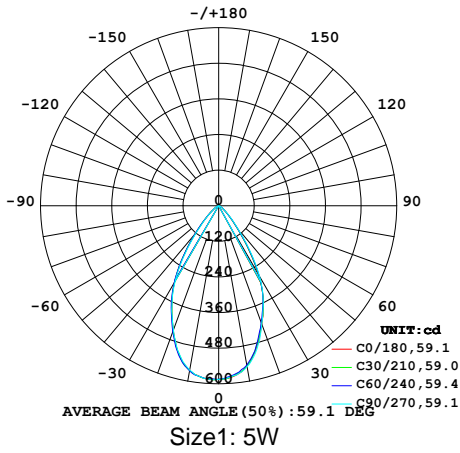


5-30W 100Lm/W IP20

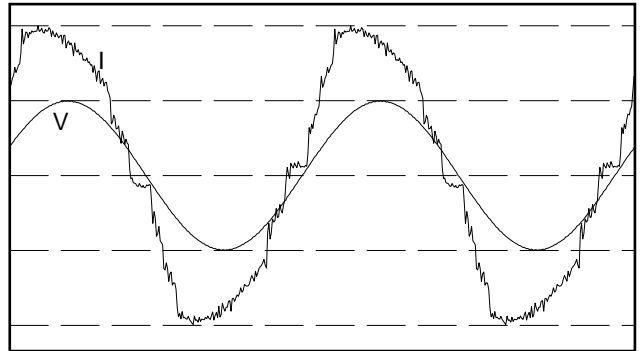
Physical	
Mass	Size1: 0.30kg, Size2: 0.46kg, Size3: 0.775kg
Dimensions	Size1: \varnothing 97mm, \varnothing hole 80mm * h 42mm (Up to 5W), Size2: \varnothing 144mm, \varnothing hole 126mm * h 65 mm (Up to 20W) Size 3: \varnothing 210mm, \varnothing hole 196mm * h 150 mm (up to 30W)
Body	Electrostatically coated die cast aluminum ring + Anodized aluminum section heat sink
Reflector	Specular (segmented or smooth)
Diffuser	Poly carbonate - Milky
Protection	IP20 (IP54 Front)
Mounting	False ceiling recessed, spring-loaded clamp
Photometric	
Light Source	COB LED
Efficacy	100-110 Lm/W
Spread angle	60° (Size1) / 60° (Size2) / 30° (Size3)
Spectrometric	
CCT	3000-6000°K
CRI	83.3
Electrical	
Power supply	220VAC, 50Hz
Power	5/12/20/30W
Current	0.052/0.064/0.1/0.15 A (RMS)
Power Factor	0.97
THDI	8.6%



Polar radiation distribution



Electrical oscillography



Art. no.	Type	Power	CCT
SLMD10-COB005230--	LED Down light COB (size1)	5W	3000°K
SLMD10-COB005240--	LED Down light COB (size1)	5W	4000°K
SLMD10-COB005260--	LED Down light COB (size1)	5W	6000°K
SLMD15-COB012230--	LED Down light COB (size2)	12W	3000°K
SLMD15-COB012240--	LED Down light COB (size2)	12W	4000°K
SLMD15-COB012260--	LED Down light COB (size2)	12W	6000°K
SLMD15-COB020230--	LED Down light COB (size2)	20W	3000°K
SLMD15-COB020240--	LED Down light COB (size2)	20W	4000°K
SLMD15-COB020260--	LED Down light COB (size2)	20W	6000°K
SLMD20-COB030230--	LED Down light COB (size3)	30W	3000°K
SLMD20-COB030240--	LED Down light COB (size3)	30W	4000°K
SLMD20-COB030260--	LED Down light COB (size3)	30W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Surface mounted LED Down light (reflector/diffuser based)

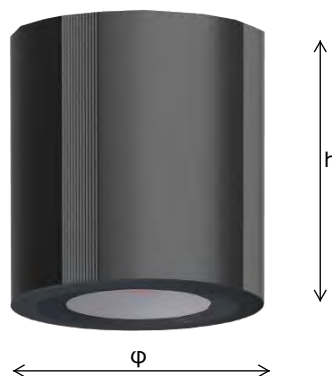
For office space and
general indoors lighting

Highly efficient replacement to conventional down lights, saving both power and space. Size and configuration allow easy installation and maintenance. Decorative shape fits with modern architecture.

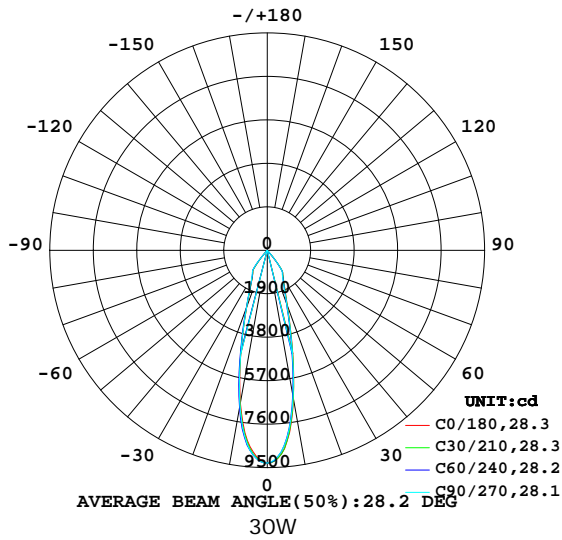
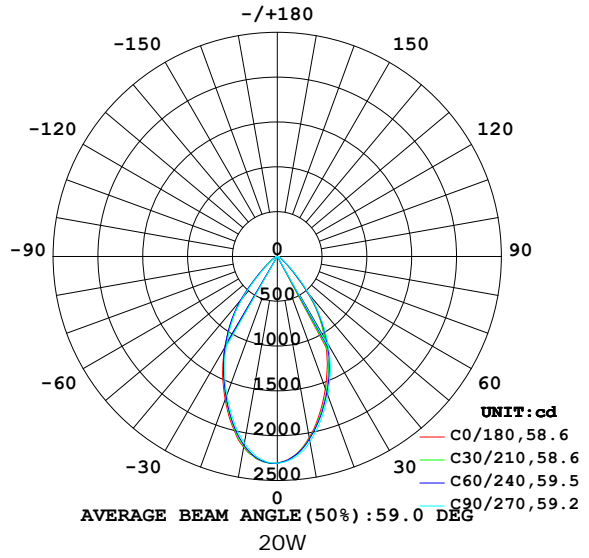
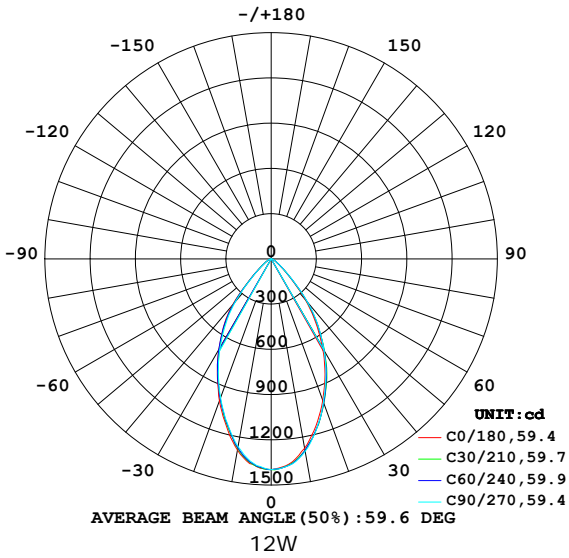


12-30W 100Lm/W IP54

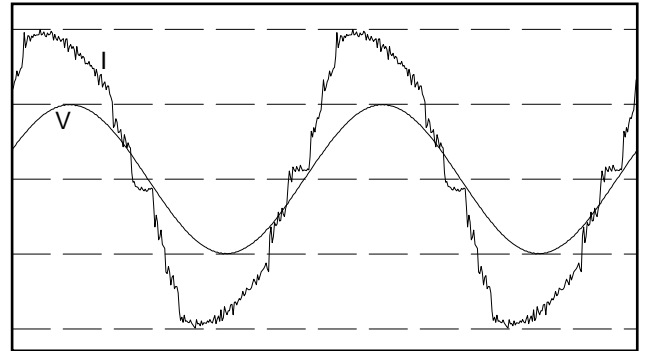
Physical	
Mass	1.55kg
Dimensions	φ136 * h150mm
Body	Electrostatically coated die cast aluminum ring + extruded aluminum tube
Reflector	Specular (segmented or smooth)
Diffuser	Poly carbonate - Milky
Protection	IP54
Mounting	M4/M6 Fischer screws, surface / pendent with tension cable mounted
Photometric	
Light Source	COB LED
Efficacy	100 Lm/W
Spread angle	60°/28°
Spectrometric	
CCT	3000-6000°K
CRI	83.3
Electrical	
Power supply	220VAC, 50Hz
Power	2/20/30W
Current	0.064/0.1/0.15 A (RMS)
Power Factor	0.97
THDI	8.6%



Polar radiation distribution



Electrical oscilloscopy



Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Surface mounted Down light

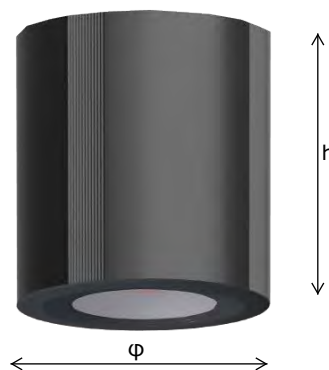
For decorative and main lighting

A modular solution for decorative indoor lighting, compatible with both classic and modern style architecture. The universal E27 Bulb base offers flexibility and liberty of choice for various lighting options at will.

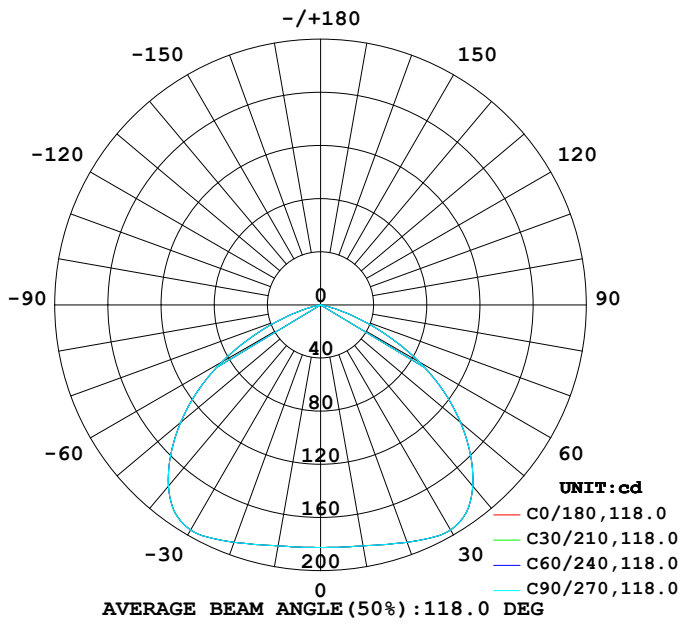


E27 Bulb base IP20

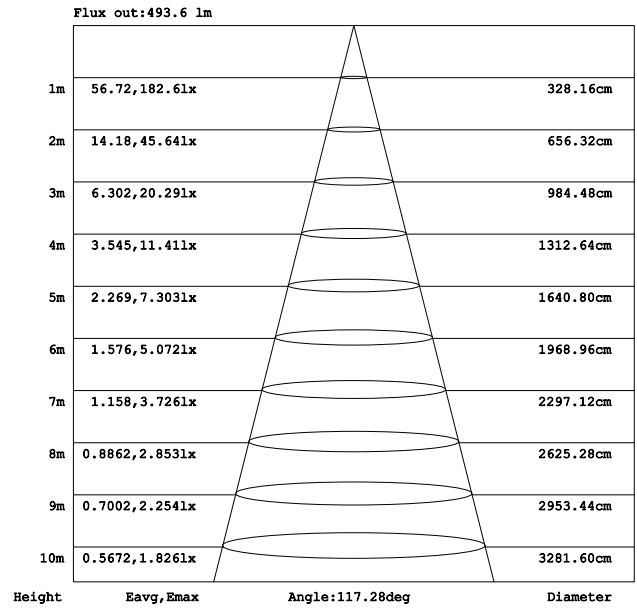
Physical	
Mass	1.175kg
Dimensions	φ 136mm * h 195mm
Body	Electrostatically coated section/die-cast aluminum
Diffuser	Open
Reflector	Polished Anodized Aluminum
Protection	IP20, IK08
Mounting	M4-M6 Fischer screws, surface / pendent with tension cable mounting
Photometric	
Light Source	Light Source : E27 Bulb(s) up to 15cm length
LOR	48.5% (measurements are based on 12W LED bulb)
Spread angle	118° (measurements are based on 12W LED bulb)
Spectrometric	
	As per installed Bulb(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W



Polar radiation distribution



Horizontal illuminance



Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

Decorative lighting

Hemispherical Pendent

Decorative and main lighting
for cuisines and halls

Simple and effective solution for decorative and main lighting. Suitable for both low clearances to make concentrated yet glare-free lighting (as in cuisines requirements) or for high clearances to maintain an efficient lighting achieving both concentration and uniformity. The universal E27 Bulb base offers flexibility and liberty of choice for various lighting options at will.

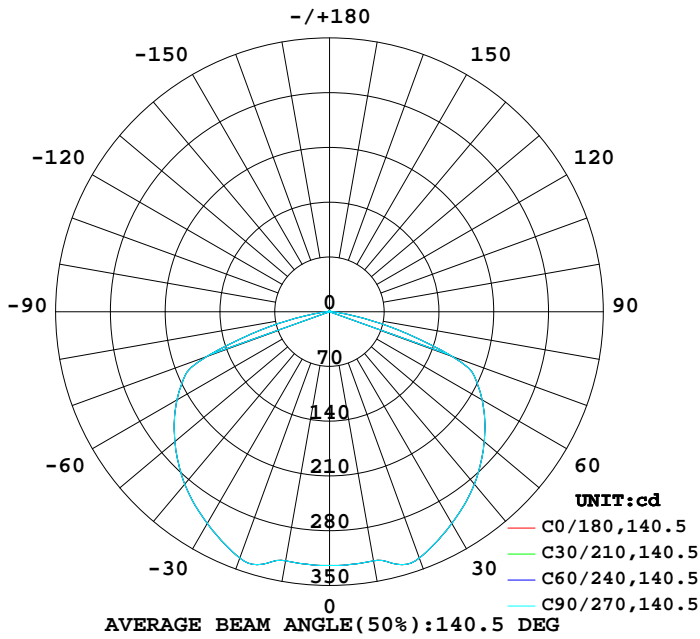


E27 Bulb base IP20

Physical	
Mass	0.55kg
Dimensions	φ 413mm * h 265mm
Body/reflector	Electrostatically coated aluminum sheet
Emitting surface	Open
Protection	IP20
Mounting	Pendent, tension conductor cable, length per request
Photometric	
Light Source	E27 Bulb
LOR	87.6% (measurements are based on 15W LED bulb, fully embedded)
Spread angle	140.5°(measurements are based on 15W LED bulb, fully embedded)
Spectrometric	
	As per installed Bulb(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W



Polar radiation distribution



Art. no.	Type	Base	Var.
SOKOL-E27000000--	Hemispherical pendent	E27	None

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED Aluminum Sections

For decorative indirect embedded lighting

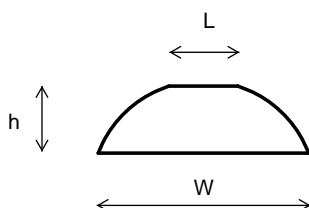
Perfect solution for indirect decorative lighting, embedded within gypsum board or furniture it can totally eliminate glare and provide eye comfort by smoothly interacting with ambient textures. Power flexibility allows dimming providing master control of lighting.



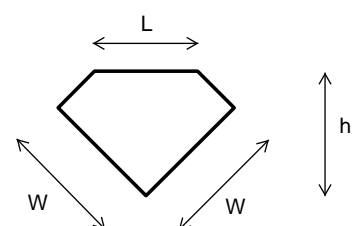
14W/m IP42

Physical	
Mass	R Section 0.35kg/m, V Section 0.45kg/m
Dimensions	R Section W 44mm * h 14mm * L 15mm V Section W 26mm* 26mm* h26mm * L 15mm, Lengths: 0.3, 0.6, 1-6 m
Body	Electrostatically coated aluminum sections
Diffuser	Poly carbonate, Clear/milky/prismatic
Protection	IP41
Mounting	R section for Flat Surfaces, V Section for corners by clamps, double face tape, screws for gypsum board
Photometric	
Light Source	SMD LEDs
Efficacy	52 Lm/W for R section, 25 Lm/W for V Section
Spread angle	100° for R Section, 66° for V Section
Spectrometric	
CCT	3000/6000°K
CRI	83
Electrical	
Power supply	12VDC, AC Drivers up to 100W (7m)
Power	14W/m

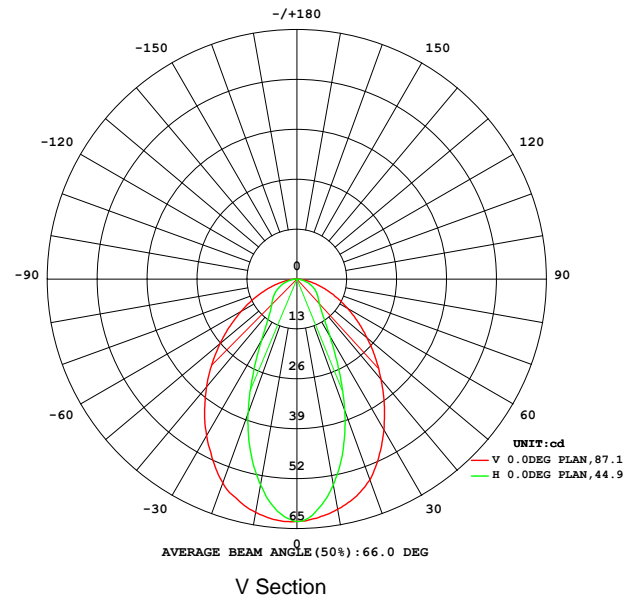
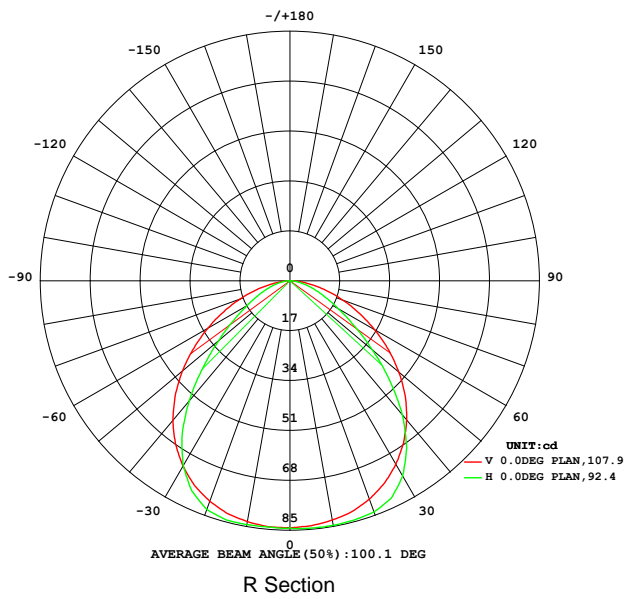
R Section



V Section



Polar radiation distribution



Art. no.	Type	Power	CCT
KLR30-SMD004230--	LED Aluminum R section 30cm	4W	3000°K
KLR40-SMD006230--	LED Aluminum R section 40cm	6W	3000°K
KLR100-SMD014230--	LED Aluminum R section 100cm	14W	3000°K
KLV30-SMD004230--	LED Aluminum V section 30cm	4W	3000°K
KLV40-SMD006230--	LED Aluminum V section 40cm	6W	3000°K
KLV100-SMD014230--	LED Aluminum V section 100cm	14W	3000°K
KLR30-SMD004260--	LED Aluminum R section 30cm	4W	6000°K
KLR40-SMD006260--	LED Aluminum R section 40cm	6W	6000°K
KLR100-SMD014260--	LED Aluminum R section 100cm	14W	6000°K
KLV30-SMD004260--	LED Aluminum V section 30cm	4W	6000°K
KLV40-SMD006260--	LED Aluminum V section 40cm	6W	6000°K
KLV100-SMD014260--	LED Aluminum V section 100cm	14W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED Track light with adjustable spread angle

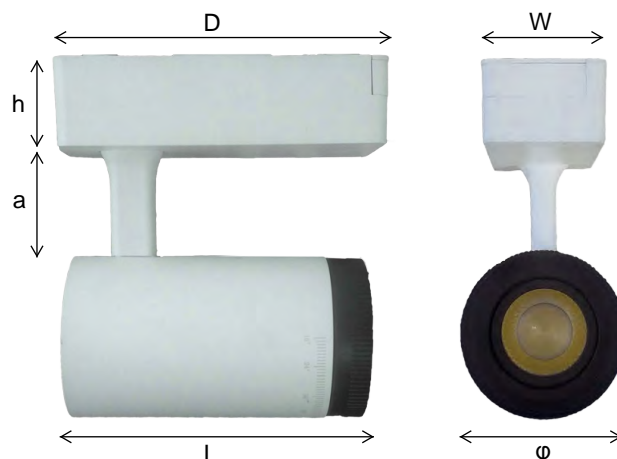
For indoor decorative
directed lighting

Highly efficient replacement to conventional track lights, saving both power and space. Highly adaptive due to wide range of selection for spread angle, altitude and swivel providing a one-for-all solution for artistic decoration. sleek design merges easily with modern architecture.

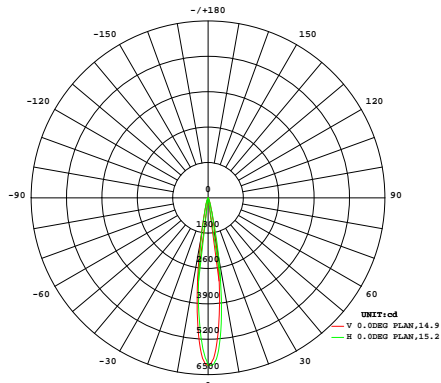


10W 60Lm/W IP20

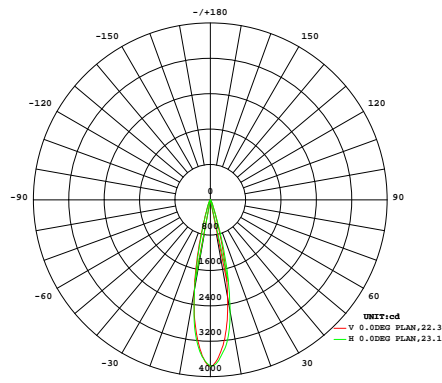
Physical	
Mass	0.355kg (head), 0.52kg/1m of track
Dimensions	head ϕ 65mm* L 115mm, D 125*W 48*h 32mm , a 43mm, track 35*12mm
Body	Electrostatically coated aluminum sections (head/track) + insulated embedded dual copper track / brushes
Diffuser	Adjustable focus glass lens
Protection	IP20 (IP54 Front)
Mounting	Surface mounted track, Head with adjustable swivel +/- 180° and altitude +90/-10°
Photometric	
Light Source	COB LED
Efficacy	58.6-74.5 Lm/W (spread angle dependent)
Spread angle	15-40° (adjustable with frontal rotary knob)
Spectrometric	
CCT	3000-6000°K
CRI	87.4
Electrical	
Power supply	220VAC, 50Hz
Power	10W
Current	0.091A (RMS)
Power Factor	0.51
THDI	149%



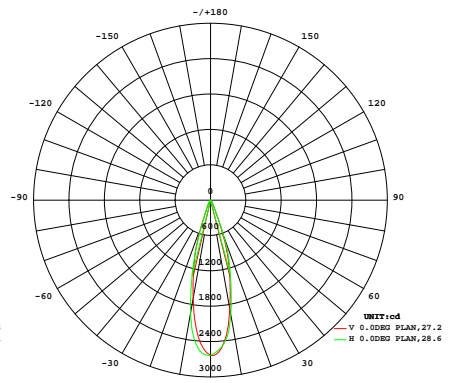
Polar radiation distribution



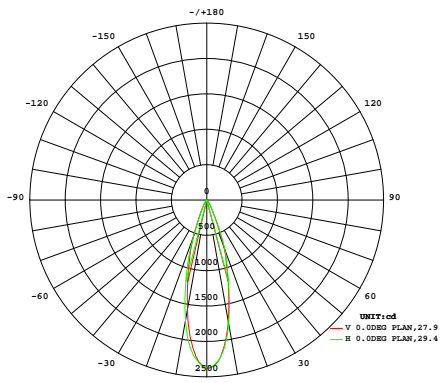
angle 1: minimum



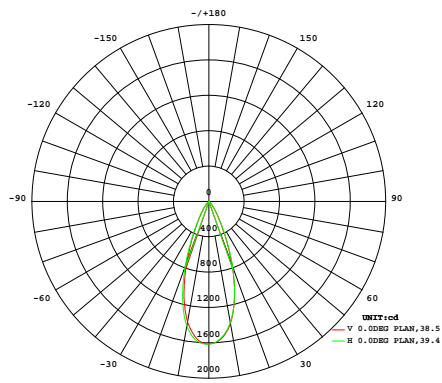
angle 2



angle 3

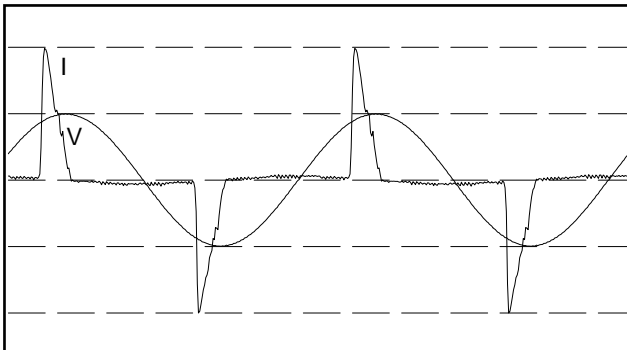


angle 4



angle 5: maximum

Electrical oscilloscopy



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Special

LED Emergency exit sign

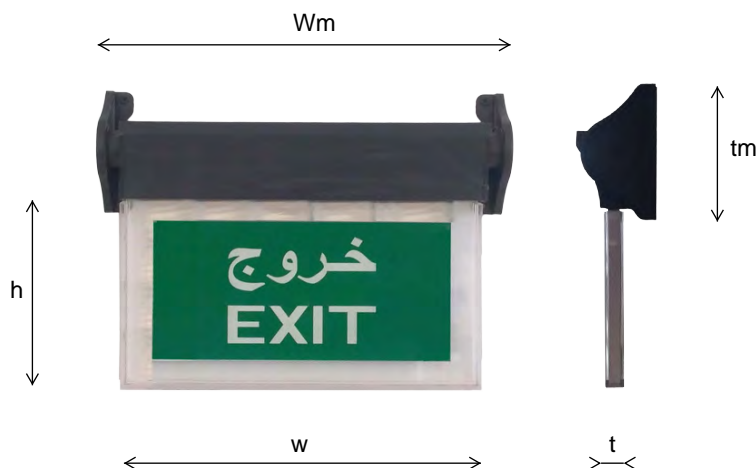
For emergency backup needs of exits and general labeling

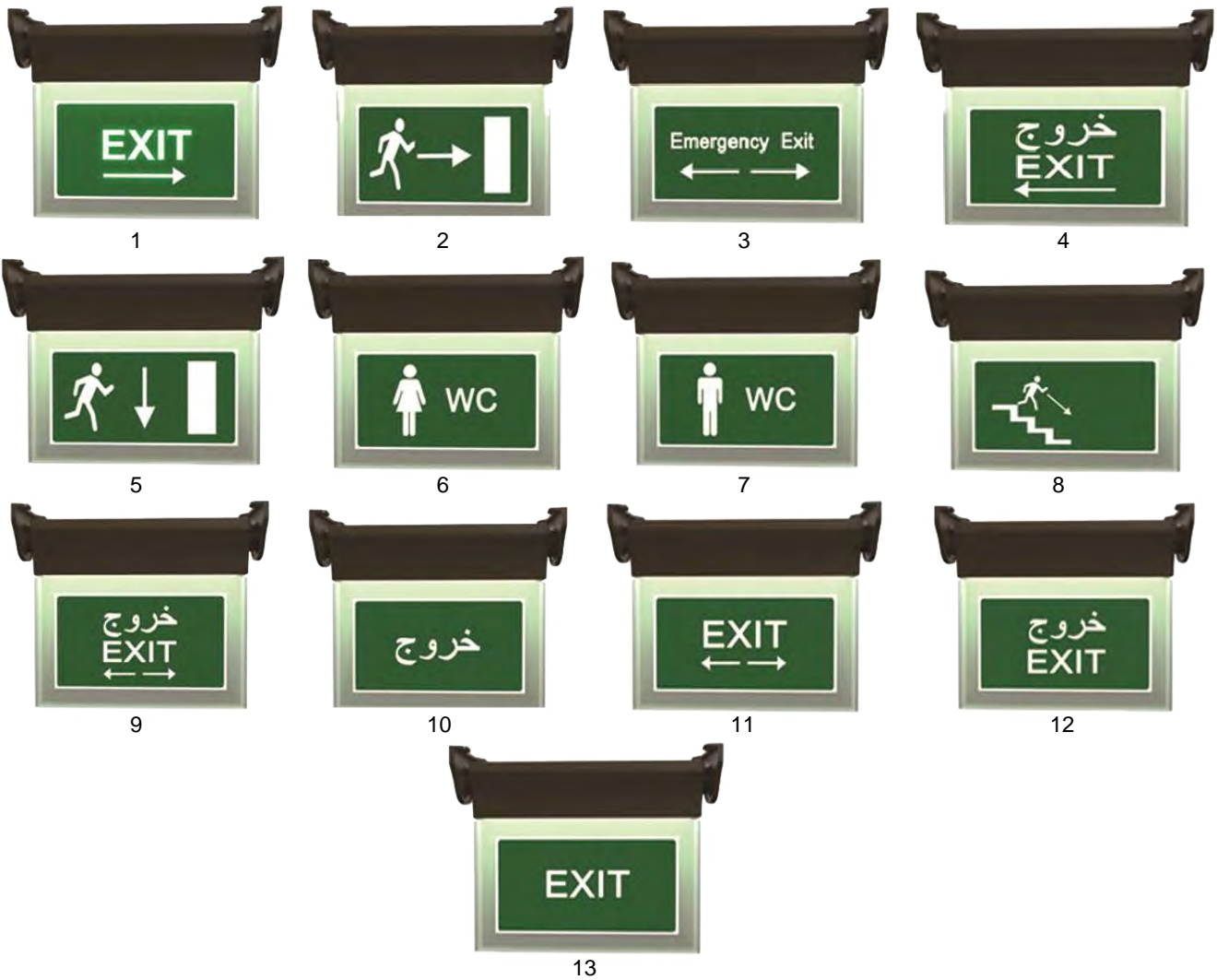
LED efficiency and size advantage allows better placement within a compact sized body, long back up time exceeds requirements of most situations, easy switching between wall and ceiling configuration and availability of custom signs and colors makes it a universal solution for all situations. Isolation transformer guarantees best protection against grid instability. Li-ion batteries ensure linear performance throughout lifetime by solving the 'memory effect' problems of Ni-Cd batteries



4VA Wall/ceiling IP41

Physical	
Mass	1.44kg
Dimensions	h 160 * w305 * t 18mm, Wm 358mm * tm 110mm
Body	Electrostatically coated anodized aluminum section +ABS Holders
Emitting surface	Injection molded Acrylic, single or double sided, reflector edge
Protection	IP41
Mounting	Wall or ceiling mounting, M4-M6 Fischer screws or bolts
Photometric	
Light Source	Through-hole super bright LEDs
Spectrometric	
	Green color, 555nm (+/- 20nm), or any color by request
Electrical	
Power supply	220VAC , 50Hz, isolation transformer
Power	4VA input
Battery	Li-ion Battery, 3.7V 18650
Backup time	6 hours





Art. no.	Type*	Power	CCT
EMEX1-SMD00400001	Exit directional	4VA	Green
EMEX2-SMD00400001	Elevator entry	4VA	Green
EMEX3-SMD00400001	Emergency dual directional	4VA	Green
EMEX4-SMD00400001	Exit (En/Ar) directional	4VA	Green
EMEX5-SMD00400001	Storey down	4VA	Green
EMEX6-SMD00400001	Ladies WC	4VA	Green
EMEX7-SMD00400001	Gents. WC	4VA	Green
EMEX8-SMD00400001	Stairs down	4VA	Green
EMEX9-SMD00400001	Exit (En/Ar) dual directional	4VA	Green
EMEX10-SMD00400001	Exit (Ar) plain	4VA	Green
EMEX11-SMD00400001	Exit dual directional	4VA	Green
EMEX12-SMD00400001	Exit (En/Ar) Plain	4VA	Green
EMEX13-SMD00400001	Exit Plain	4VA	Green

* Custom shapes also available

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4. Outdoor lighting

Landscape lighting

LED bollard (Moon)

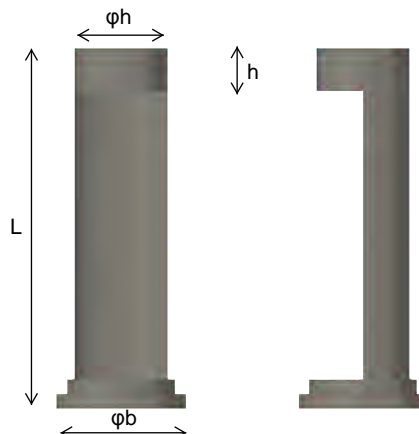
Landscape lighting solution for garden passageways

A decorative bollard for landscape lighting, light source is SMD LED PCB facing downwards and emission is through a diffuser and a reflector, totally eliminating glare. Light emission all around symmetrically provides an asset for smart decoration

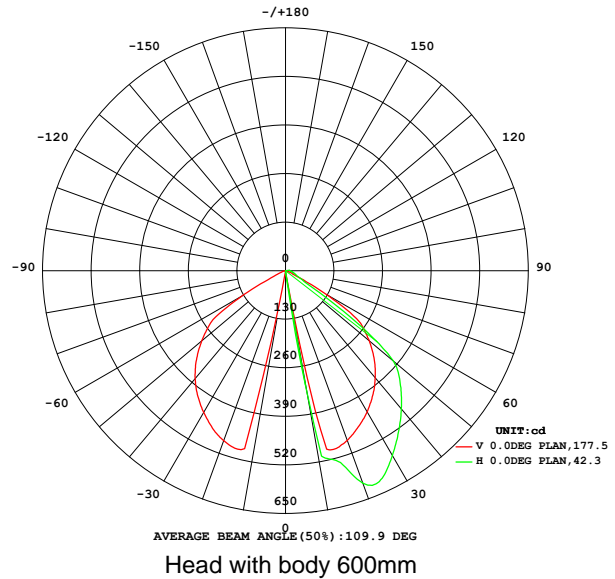
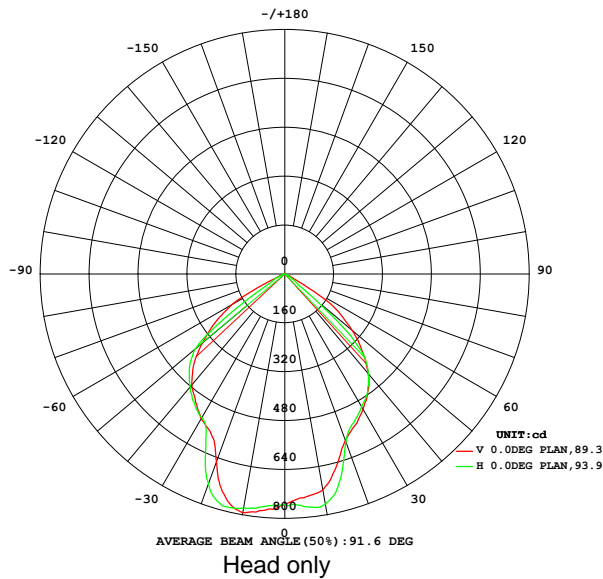


13W 97Lm/W 3000-6000°K IP65

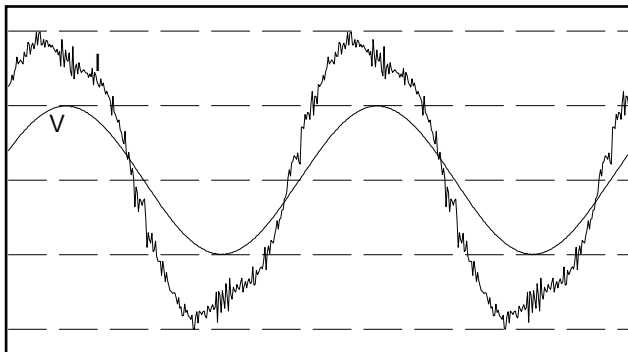
Physical	
Mass	Head 1.4kg
Dimensions	ϕ_b 195mm * ϕ_h 130mm * h40mm, L 1000/750/600mm
Body	electrostatically coated sections + die cast aluminum
Reflector	Specular Aluminum
Diffuser	Clear poly carbonate
Protection	IP65
Mounting	M6-M8 Fischer screws, anchor bolts, ground mounted
Photometric	
Light Source	COB LED
Total Luminous flux	1314 Lumen @ 13.5W (+/- 1%)
Efficacy	97.3 Lm/W
Spread angle	90-100°
Spectrometric	
CCT	3000-6000°K
CRI	80
Electrical	
Power supply	220VAC, 50Hz
Power	13W nominal
Current	0.064 A (RMS)
Power Factor	0.967
THDI	11.5%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
MOONL-COB013230--	LED Bollard (Moon) Height 100cm	13W	3000°K
MOONM-COB013230--	LED Bollard (Moon) Height 75cm	13W	3000°K
MOONS-COB013230--	LED Bollard (Moon) Height 60cm	13W	3000°K
MOONL-COB013240--	LED Bollard (Moon) Height 100cm	13W	4000°K
MOONM-COB013240--	LED Bollard (Moon) Height 75cm	13W	4000°K
MOONS-COB013240--	LED Bollard (Moon) Height 60cm	13W	4000°K
MOONL-COB013260--	LED Bollard (Moon) Height 100cm	13W	6000°K
MOONM-COB013260--	LED Bollard (Moon) Height 75cm	13W	6000°K
MOONS-COB013260--	LED Bollard (Moon) Height 60cm	13W	6000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

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LED bollard (Imro)

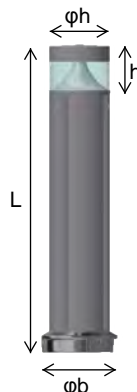
Lighting solution for gardens and general landscape lighting.

A decorative bollard for landscape lighting, light source is SMD LED PCB facing downwards and emission is through a diffuser and a reflector, totally eliminating glare. Light emission all around symmetrically provides an asset for smart decoration

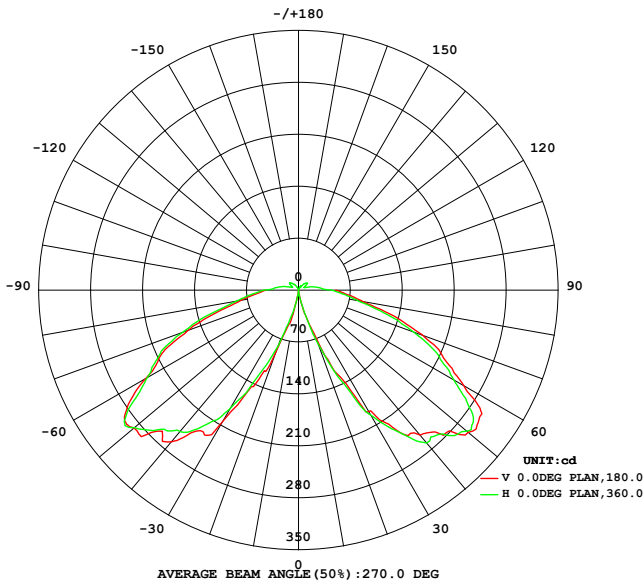


18W 68Lm/W 3000-6000°K IP65

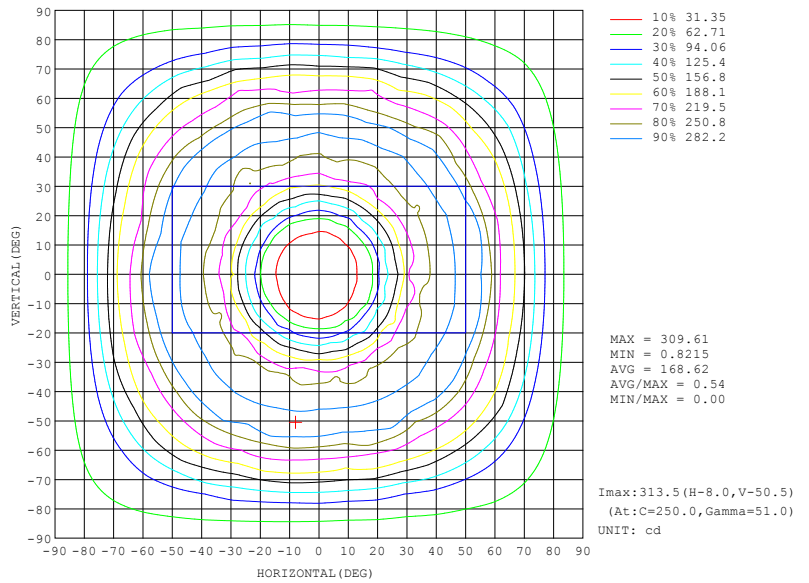
Physical	
Mass	Head 1.4kg
Dimensions	ϕ_b 170mm * ϕ_h 136mm * h110mm, L 1000/750/600mm
Body	electrostatically coated sections + die cast aluminum
Reflector	Specular Aluminum
Diffuser	Clear poly carbonate
Protection	IP65
Mounting	M6-M8 Fischer screws, anchor bolts, ground mounted
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1170 Lumen @ 17.33W (+/- 1%)
Efficacy	67.5 Lm/W
Spread angle	180°
Spectrometric	
CCT	3000-6000°K
CRI	80
Electrical	
Power supply	220VAC, 50Hz
Power	18W nominal
Current	0.086 A (RMS)
Power Factor	0.95
THDI	13.2%



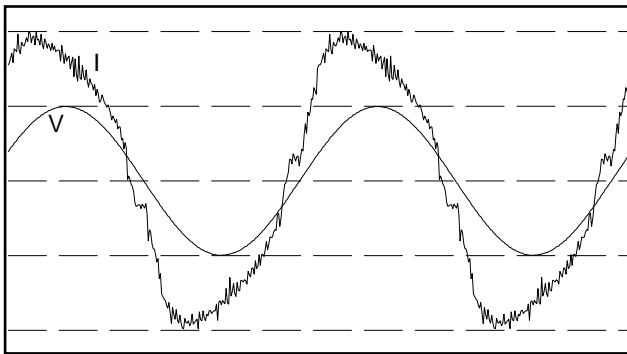
Polar radiation distribution



Luminance



Electrical oscilloscopy



Art. no.	Type	Power	CCT
IMROL-SMD018230--	LED Bollard (Imro) Height 100cm	18W	3000°K
IMROM-SMD018230--	LED Bollard (Imro) Height 75cm	18W	3000°K
IMROS-SMD018230--	LED Bollard (Imro) Height 60cm	18W	3000°K
IMROL-SMD018240--	LED Bollard (Imro) Height 100cm	18W	4000°K
IMROM-SMD018240--	LED Bollard (Imro) Height 75cm	18W	4000°K
IMROS-SMD018240--	LED Bollard (Imro) Height 60cm	18W	4000°K
IMROL-SMD018260--	LED Bollard (Imro) Height 100cm	18W	6000°K
IMROM-SMD018260--	LED Bollard (Imro) Height 75cm	18W	6000°K
IMROS-SMD018260--	LED Bollard (Imro) Height 60cm	18W	6000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

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LED bollard (Imro-square)

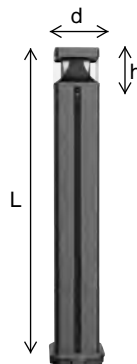
Lighting solution for gardens and general landscape lighting.

A decorative bollard for landscape lighting, light source is SMD LED PCB facing downwards and emission is through a diffuser and a reflector, totally eliminating glare. Light emission through four sides with no separating support provides an asset for smart decoration.

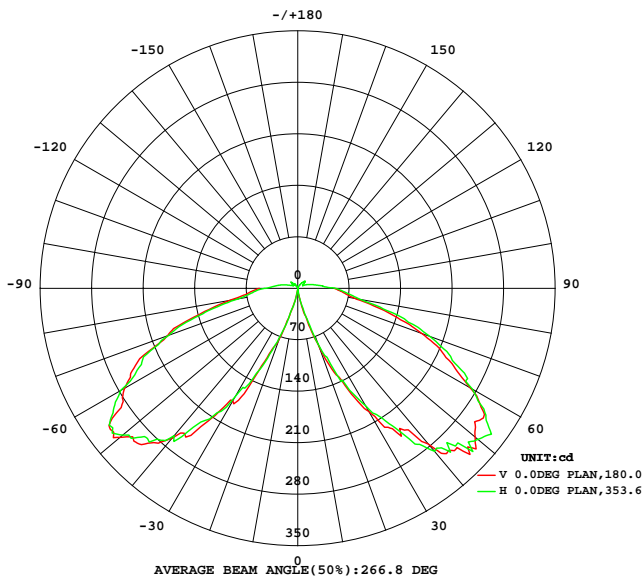


18W 70Lm/W 3000-6000°K IP65

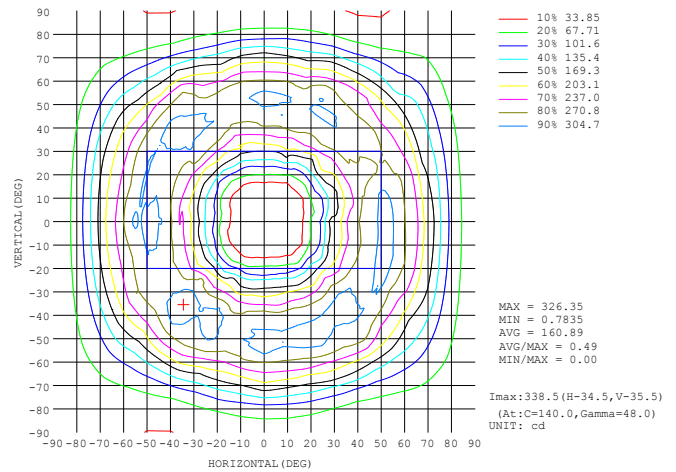
Physical	
Mass	Head 1.4kg
Dimensions	d135mm*135mm * h135mm (head), L 1000/750/600mm
Body	electrostatically coated sections + die cast aluminum
Reflector	Specular Aluminum
Diffuser	Clear poly carbonate
Protection	IP65
Mounting	M6-M8 Fischer screws, anchor bolts, ground mounted
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1180 Lumen @ 16.8W (+/- 1%)
Efficacy	70.23 Lm/W
Spread angle	180°
Spectrometric	
CCT	3000-6000°K
CRI	80
Electrical	
Power supply	220VAC, 50Hz
Power	18W nominal
Current	0.08 A (RMS)
Power Factor	0.96
THDI	12.2%



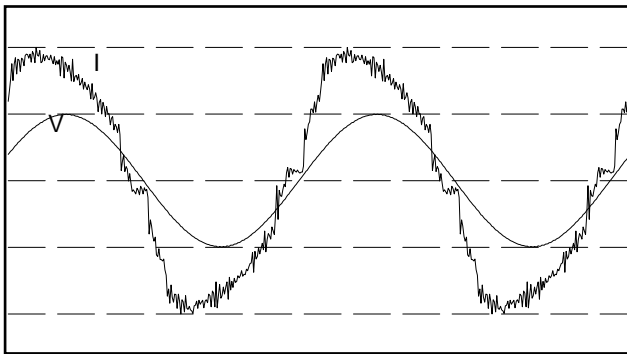
Polar radiation distribution



Luminance



Electrical oscilloscopy



Art. no.	Type	Power	CCT
IMROL SQ-SMD018230--	LED Bollard (1mro square) height 100cm	18W	3000°K
IMROM SQ-SMD018230--	LED Bollard (1mro square) height 75cm	18W	3000°K
IMROS SQ-SMD018230--	LED Bollard (1mro square) height 60cm	18W	3000°K
IMROL SQ-SMD018240--	LED Bollard (1mro square) height 100cm	18W	4000°K
IMROM SQ-SMD018240--	LED Bollard (1mro square) height 75cm	18W	4000°K
IMROS SQ-SMD018240--	LED Bollard (1mro square) height 60cm	18W	4000°K
IMROL SQ-SMD018260--	LED Bollard (1mro square) height 100cm	18W	6000°K
IMROM SQ-SMD018260--	LED Bollard (1mro square) height 75cm	18W	6000°K
IMROS SQ-SMD018260--	LED Bollard (1mro square) height 60cm	18W	6000°K



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Decorative Lantern

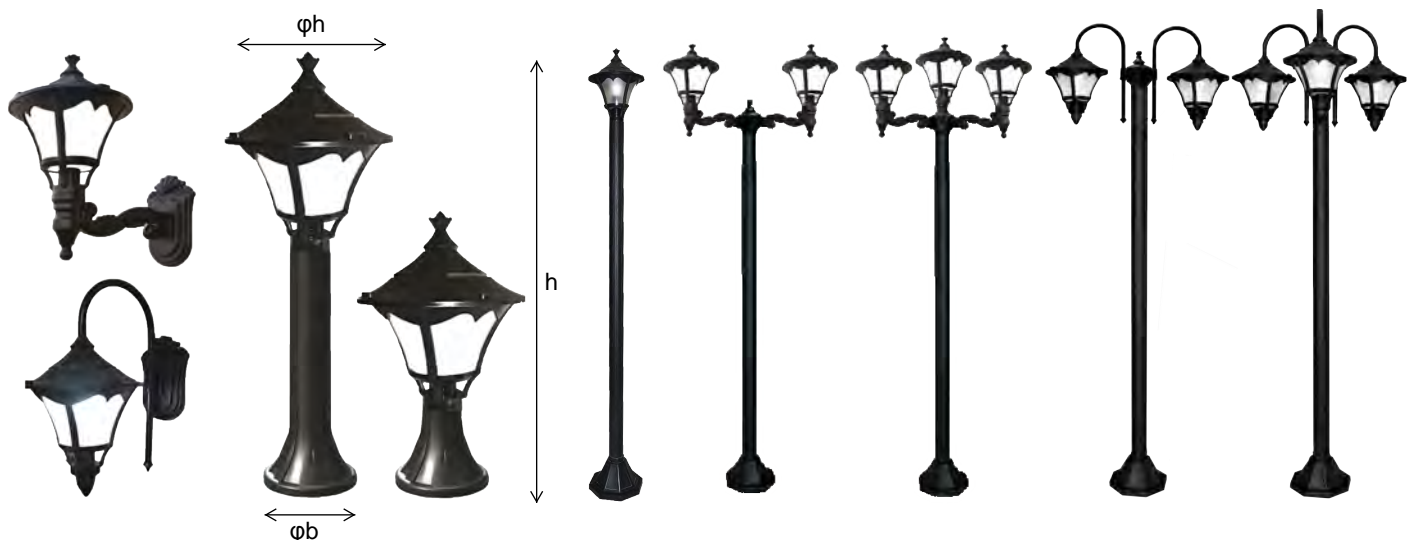
For Wall and Landscape Lighting

A modular solution for landscape and wall lighting, available as decorative lighting poles; single, double or triple, bollards, single wall top lighting units and even as decorative wall lights, indoors and outdoors. The universal E27 Bulb base offers flexibility and liberty of choice for various lighting options at will.

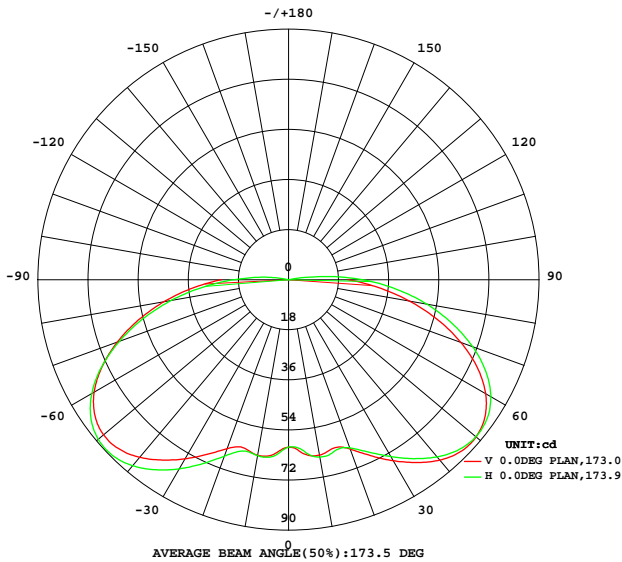


E27 Bulb base IP54

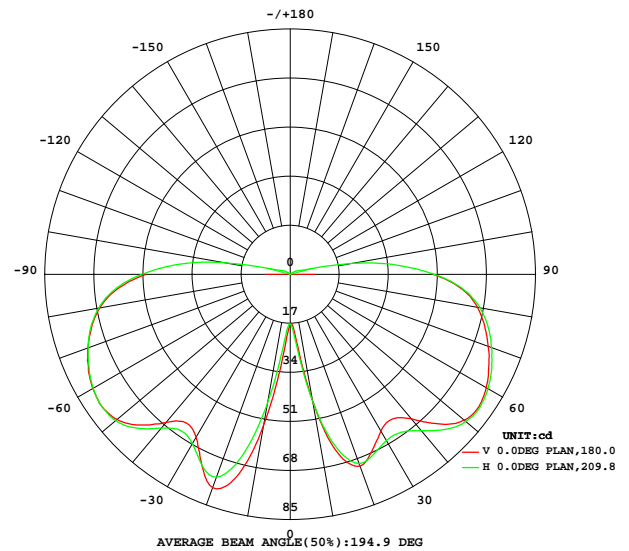
Physical	
Mass	1.625 kg (Head)
Dimensions	ϕh 295mm* ϕb 190mm*h 400-1000mm (for base/bollard model) ϕb 270mm*h2500-3000mm octagon shaped (for poles)
Body	ABS (UV resistant) + Aluminum Section tube $\phi 75$ mm (for bollards/poles)+ Aluminum base (optional)
Diffuser	Prismatic Poly carbonate (UV resistant)
Protection	IP54
Mounting	M4-M6 Fischer Screws / M4-M6 Anchor bolts
Photometric	
Light Source	E27 LED Bulb (up to 15cm in length)
LOR	43% for base fixed, 51.2% for pendent (based on typical 12W LED E27 Bulb)
Spread angle	173.5° for base fixed, 194.9° for pendent
Spectrometric	
	As per installed Bulb(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W per E27 bulb base



Polar radiation distribution



Base Fixed



Pendent

Art. no.	Type	Base	Var.
LOTUS-E27000000--	Lantern base fixed	E27	None
WIP-E27000000--	Wall lantern steel tube pendent	E27	None
WCF-E27000000--	Wall lantern ABS Arm based	E27	None
FEB75-E27000000--	lantern bollard 75cm	E27	None
FEB100-E27000000--	lantern bollard 1m	E27	None
SFP250-E27000000--	lantern single pole 2.5m	E27	None
SFP300-E27000000--	lantern single pole 3m	E27	None
DIP250-E27000000--	lantern double pole steel tube pendent 2.5m	2*E27	None
DIP300-E27000000--	lantern double pole steel tube pendent 3m	2*E27	None
DCP250-E27000000--	lantern double pole ABS Arm based 2.5m	2*E27	None
DCP300-E27000000--	lantern double pole ABS Arm based 3m	2*E27	None
TIP250-E27000000--	lantern triple pole steel tube pendent 2.5m	3*E27	None
TIP300-E27000000--	lantern triple pole steel tube pendent 3m	3*E27	None
TCP250-E27000000--	lantern triple pole ABS arm based 2.5m	3*E27	None
TCP300-E27000000--	lantern triple pole ABS arm based 3m	3*E27	None

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Decorative Parapet luminaire (box type)

For parapet/wall top and
Landscape Lighting

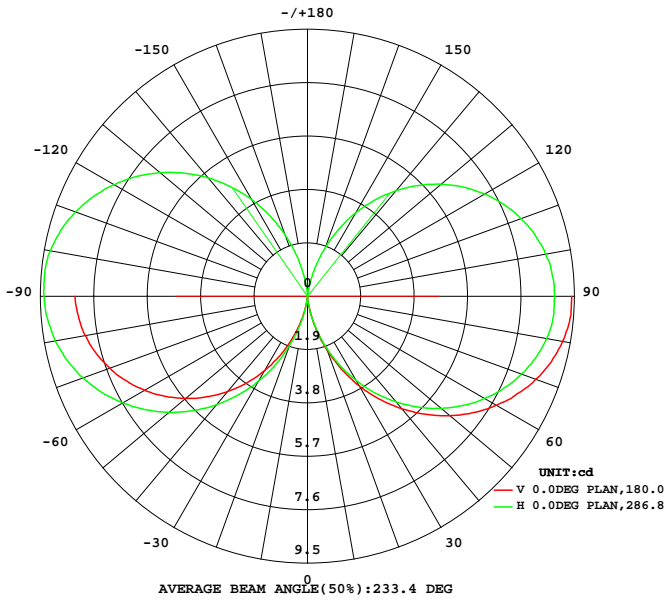
A modular solution for landscape and fence lighting. The bulb/box configuration is compatible with both classic and modern style architecture with availability of custom made windows. The universal E27 Bulb base offers flexibility and liberty of choice for various lighting options at will.

E27 Bulb base (single/dual) IP54

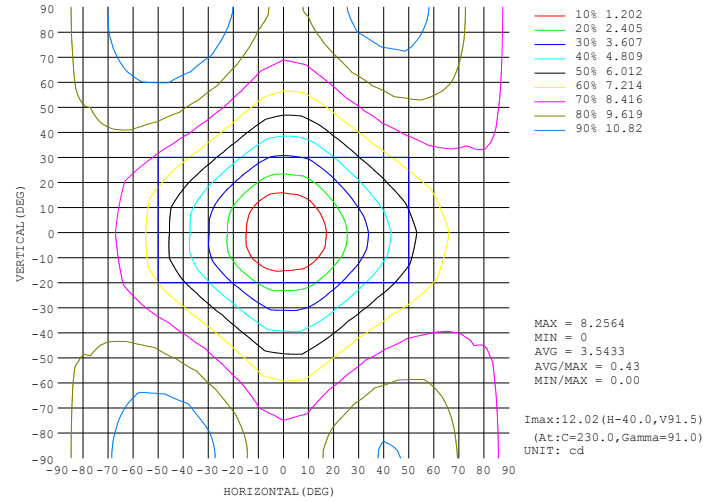
Physical	
Mass	2.18kg
Dimensions	200*200* h150mm (without decorative top)
Body	Electrostatically coated sheet steel.
Diffuser	Milky Poly carbonate (UV resistant)
Protection	IP54
Mounting	M4-M6 Fischer Screws / Anchor bolts
Photometric	
Light Source	E27 Bulb(s) up to 15cm length
LOR	8% (measurements are based on 12W LED bulb, black body)
Spread angle	233°
Spectrometric	
	As per installed Bulb(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W



Polar radiation distribution



Luminance



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Decorative plastic globe

For Wall and Landscape Lighting

A modular solution for landscape and wall lighting. The classic bulb/globe configuration with uniform light distribution for all decorative and main lighting purposes comes with the durability of Plastic body. The universal E27 Bulb base offers flexibility and liberty of choice for various lighting options at will.

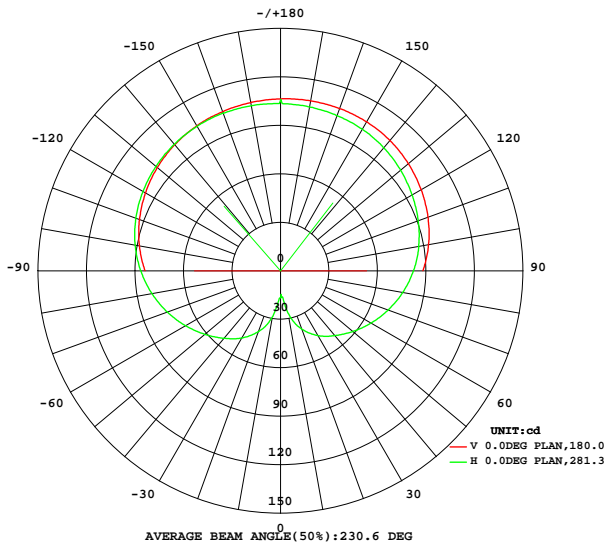


E27 Bulb base 250mm IP54

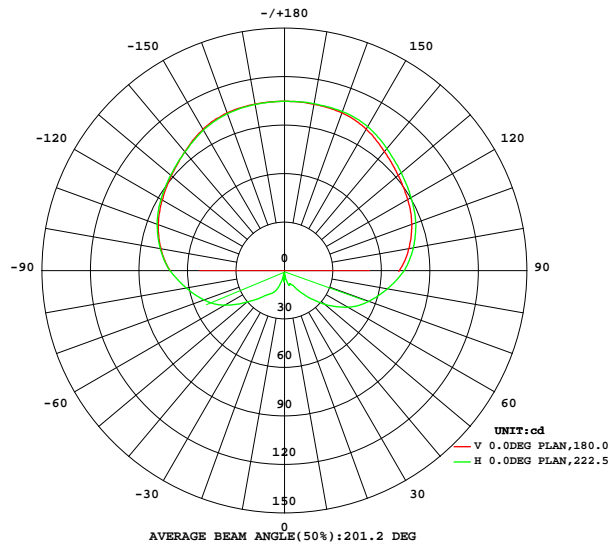
Physical	
Mass	0.75 kg (Head)
Dimensions	φ 250mm * h 435mm
Body	ABS (UV resistant), Electrostatically coated Aluminum decorative tube φ75mm (for poles), Al base (optional)
Diffuser	Poly carbonate - Milky (UV resistant)
Protection	IP54
Mounting	M4-M6 Fischer Screws / M4-M6 Anchor bolts
Photometric	
Light Source	E27 LED Bulb (up to 18cm in length)
LOR	84% for standard model, 67% for basket model (based on typical 12W LED E27 Bulb)
Spread angle	As Per Variant
Spectrometric	
As per installed Bulb(s)	
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W



Polar radiation distribution



Standard model



Basket model

Art. no.	Type	Base	Var.
GWB25-E27000000--	Globe 250mm wall top	E27	None
GWBB25-E27000000--	Globe w/basket 250mm wall top	E27	None
GWC25-E27000000--	Globe 250mm wall side	E27	None
GWCB25-E27000000--	Globew/basket 250mm wall side	E27	None
DGWCB250-E27000000--	Globe w/basket 250mm Dual pole 2500mm	2*E27	None

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED Garden pole head

For Landscape Lighting

A decorative pole head for landscape lighting, uniformly spread lighting is suitable for covering large areas with symmetry while maintaining a modern sleek look compatible with a wide range of architecture standards.

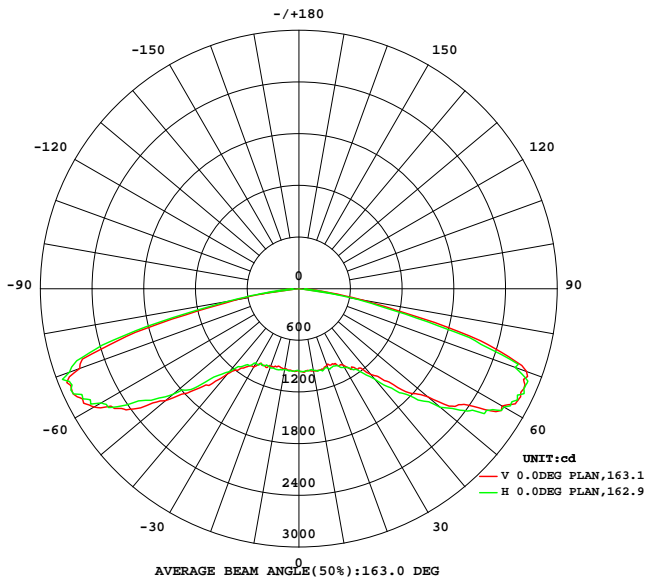


70W 122Lm/W 3000°K IP65

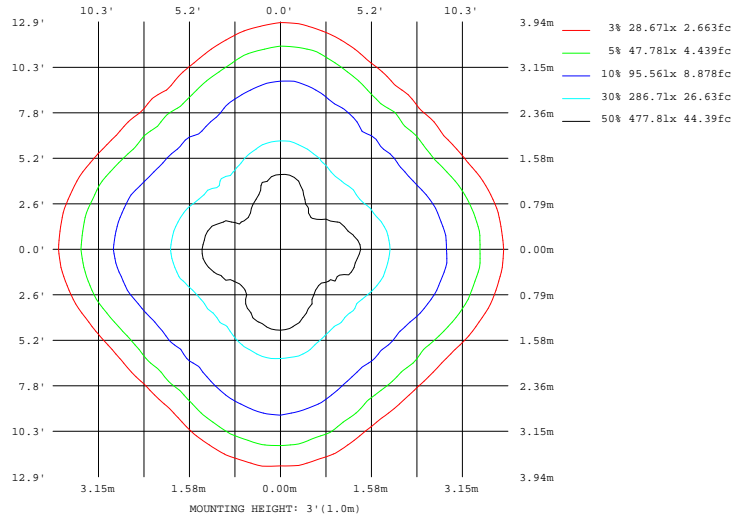
Physical	
Mass	6.535 kg (Head)
Dimensions	φ 585mm * h 390mm
Body	Electrostatically coated die cast and press formed Aluminum
Diffuser	PMMA Lenses with Poly carbonate outer shield
Protection	IP65
Mounting	Pole mounting up to φ75mm with tightening bolts
Photometric	
Light Source	SMD LEDs
Total Luminous flux	8505 Lm @ 69.3W (+/- 1%)
Efficacy	122.72 Lm/W
Spread angle	163°
Spectrometric	
CCT	2972°K
CRI	72.2
Electrical	
Power supply	220VAC, 50Hz
Power	70W nominal
Current	0.32 A (RMS)
Power Factor	0.986
THDI	3.0%



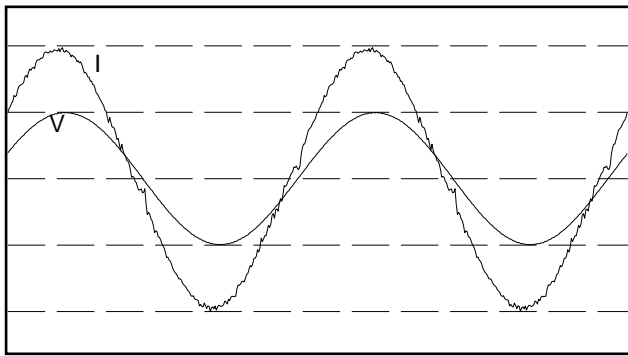
Polar radiation distribution



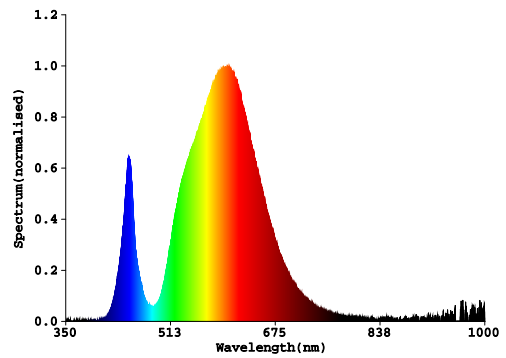
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED garden spike

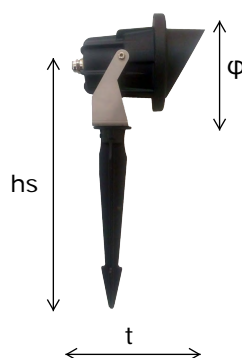
For decorative outdoors garden/plant vectored lighting

LED offers an optimum solution for garden spike, since it offers better efficacy than conventional solutions along with a wide range. Reflector enables a narrow beam that can cover a long distance suitable for trees lighting.

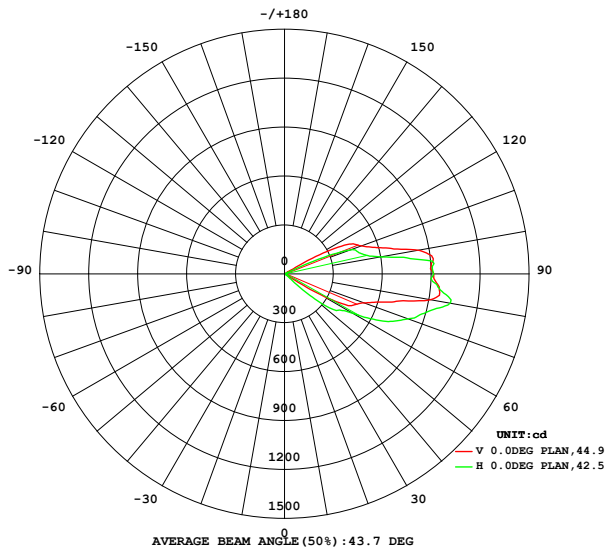


10W 60Lm/W 3000°K IP67

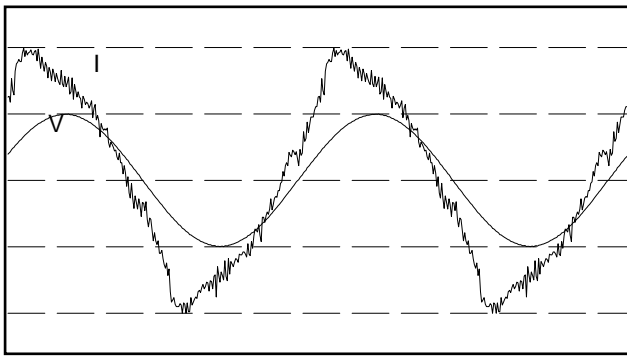
Physical	
Mass	0.825kg
Dimensions	φ 100mm * t 145mm * hs 225mm
Body	Die cast aluminum body+spike, Stainless steel holder
Reflector	Segmented specular
Diffuser	Tempered clear glass
Protection	IP67, IK08
Mounting	Dirt / soil direct plunger
Photometric	
Light Source	COB LED
Total Luminous flux	604 Lumen (+/-1%) @ 10W
Efficacy	60.4 Lm/W
Spread angle	43.7° (Assymetrical)
Spectrometric	
CCT	3000-4000°K
CRI	81.7
Electrical	
Power supply	220VAC, 50Hz
Power	10W
Current	0.05 A (RMS)
Power Factor	0.926
THDI	13.5%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
HAN-COB010230--	LED Garden spike	10W	3000°K
HAN-COB010240--	LED Garden spike	10W	4000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/ leakage protected supply as per national code.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED circular up light

For decorative outdoors building and landscape lighting

LED offers an optimum solution for up light, since it offers better efficacy than conventional solutions along with a wide range of white color shades and powers. Lenses enable a narrow beam that can cover heights up to 20 meters with beautiful artistic effect. Features separate fixation screws rather than using assembly screws, thus ensuring that water tight performance is not affected by installation.

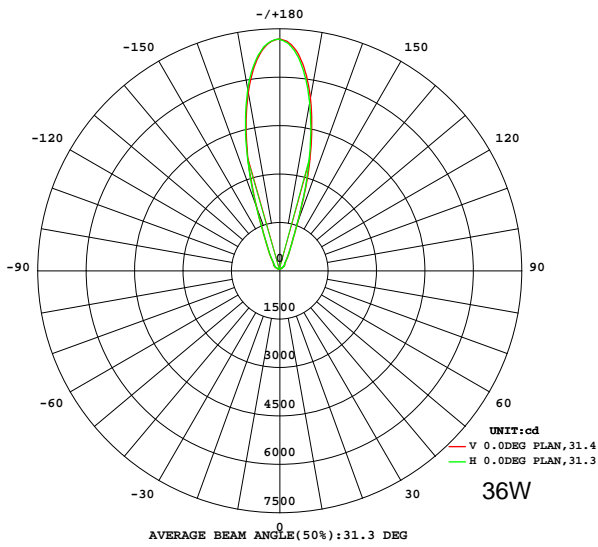
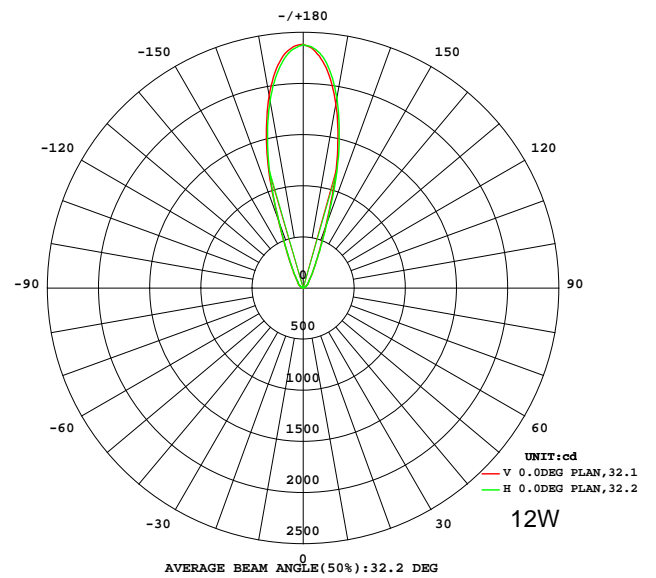
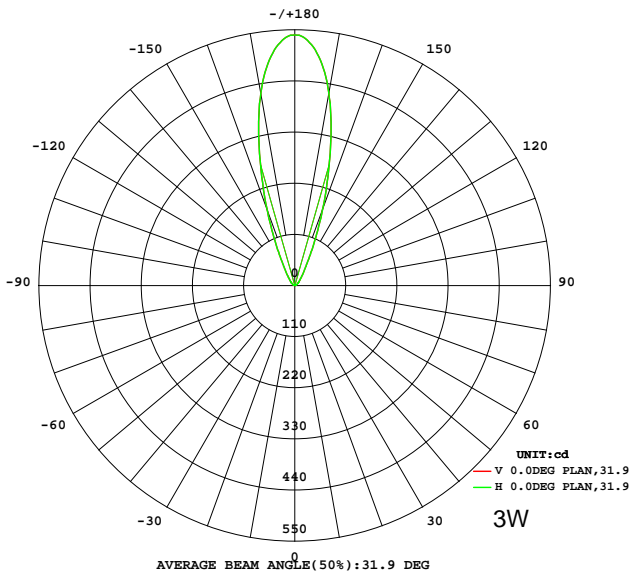


3/12/36W 65Lm/W 3000°K IP67

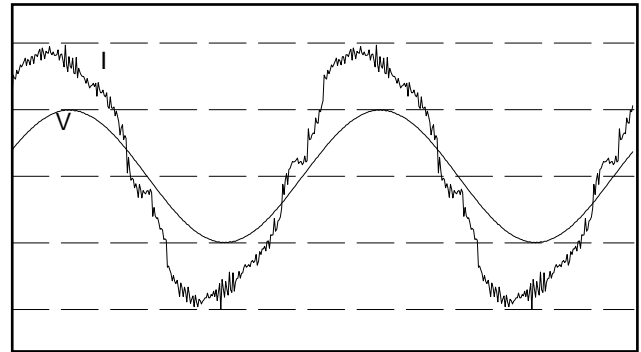
Physical	
Mass	0.44 kg (3W) / 1.215kg (12W) / 4.1kg (36W)
Dimensions	φ102mm*h90mm (3W)/ φ180mm*h90mm (12W)/ φ300mm*h90mm (36W)
Body	Stainless steel ring, Die cast aluminum heat sink, ABS outer shell
Diffuser	Clear glass, tempered, 12mm thickness
Protection	IP67, IK08
Mounting	Ground recessed ABS cylinder
Photometric	
Light Source	SMD LEDs
Total Luminous flux	211.56/931.8/2942 Lumen @ 3/12/36W (+/-1%)
Efficacy	60.83 Lm/W @3W , 72.43Lm/W @12W , 78.69Lm/W @ 36W
Spread angle	32° (Symmetrical)
Spectrometric	
CCT	3000°K
CRI	62
Electrical	
Power supply	220VAC, 50Hz
Power	3/12/36w
Current	0.033/0.106/0.32 A (RMS)
Power Factor	0.5
THDI	150-180%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
SPCI11-SMD003230--	LED circular up light	3W	3000°K
SPCI12-SMD012230--	LED circular up light	12W	3000°K
SPCI13-SMD036230--	LED circular up light	36W	3000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

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LED circular up light

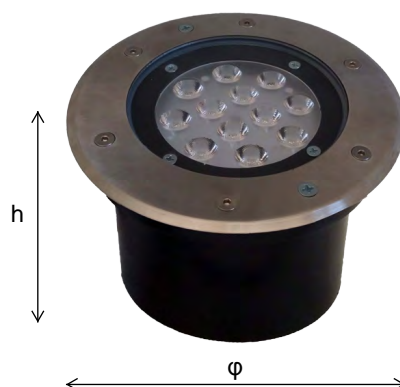
For decorative outdoors building and landscape lighting

LED offers an optimum solution for up light, since it offers better efficacy than conventional solutions along with a wide range of white color shades and powers. Lenses enable a narrow beam that can cover heights up to 20 meters with beautiful artistic effect. Features separate fixation screws rather than using assembly screws, thus ensuring that water tight performance is not affected by installation.

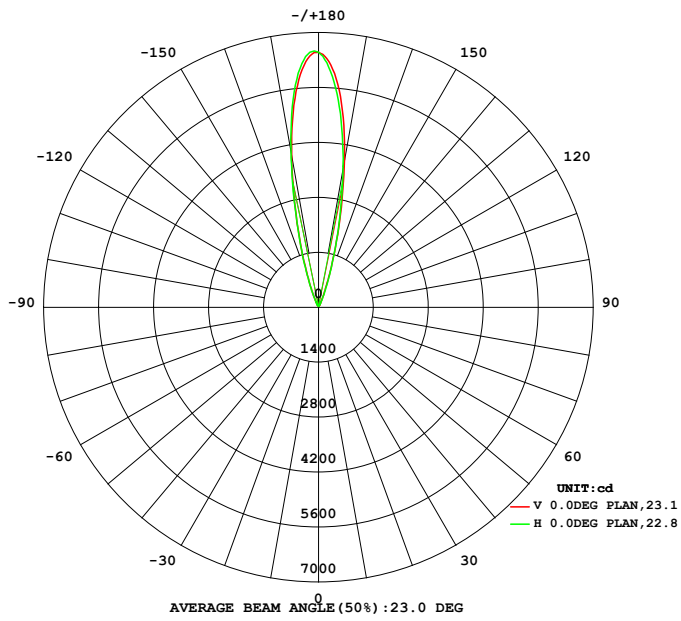


12W 106Lm/W 3000-6000°K IP67

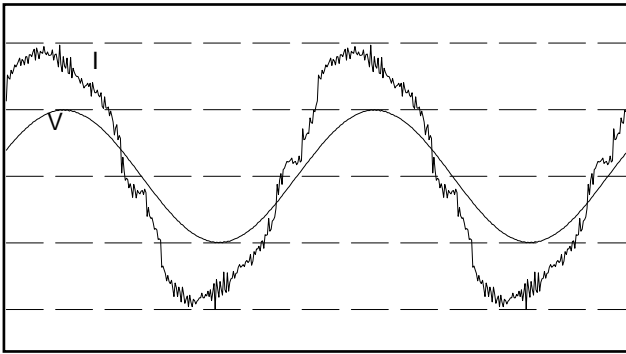
Physical	
Mass	1.75kg
Dimensions	φ180mm*h110mm
Body	Stainless steel ring, Die cast aluminum heat sink, ABS outer shell
Diffuser	Clear glass, tempered, 12mm thickness
Protection	IP67, IK08
Mounting	Ground recessed ABS cylinder
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1326 Lm (+/-1%) @12.45W
Efficacy	106.5 Lm/W
Spread angle	23° (Symmetrical)
Spectrometric	
CCT	3000-6000°K
CRI	75.3
Electrical	
Power supply	220VAC, 50Hz
Power	12W
Current	0.059 A (RMS)
Power Factor	0.967
THDI	11.1%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
ZD-SMD012230--	LED circular up light	12W	3000°K
ZD-SMD012240--	LED circular up light	12W	4000°K
ZD-SMD012260--	LED circular up light	12W	6000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

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LED circular up light (Wide beam)

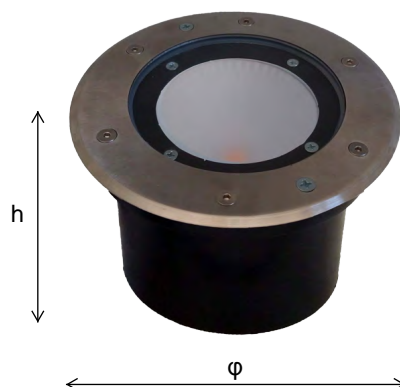
For decorative outdoors building and landscape lighting



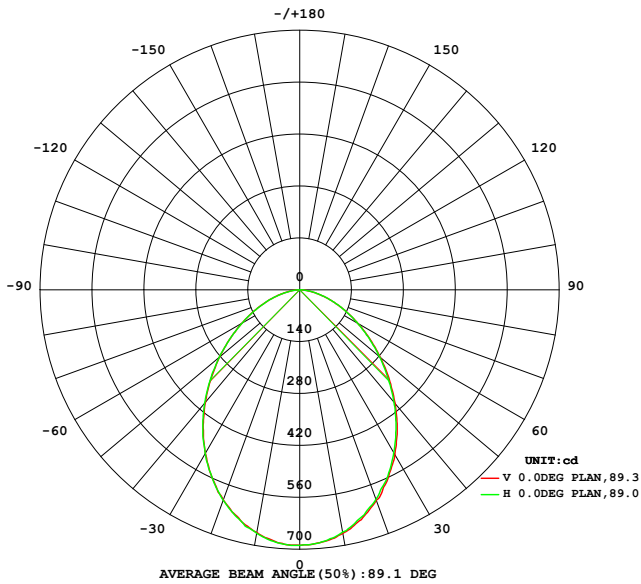
LED offers an optimum solution for up light, since it offers better efficacy than conventional solutions along with a wide range of white color shades and powers. Lenses enable a narrow beam that can cover heights up to 20 meters with beautiful artistic effect. Features separate fixation screws rather than using assembly screws, thus ensuring that water tight performance is not affected by installation.

15W 92Lm/W 3000-6000°K IP67

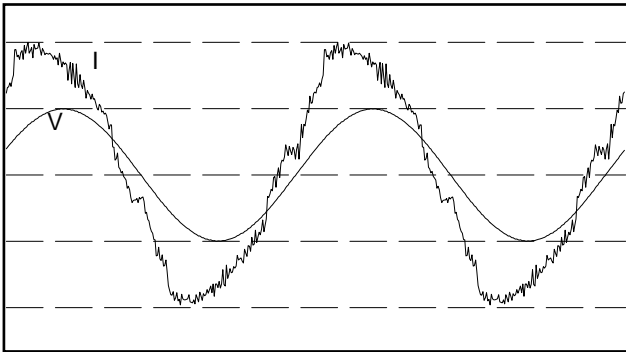
Physical	
Mass	1.75kg
Dimensions	φ180mm*h110mm
Body	Stainless steel ring, Die cast aluminum heat sink, ABS outer shell
Diffuser	Clear glass, tempered, 12mm thickness
Protection	IP67, IK08
Mounting	Ground recessed ABS cylinder
Photometric	
Light Source	COB LED
Total Luminous flux	1469 Lumen (+/-1%) @15.94W
Efficacy	92.16 Lm/W
Spread angle	89° (Symmetrical)
Spectrometric	
CCT	3000-6000°K
CRI	75.3
Electrical	
Power supply	220VAC, 50Hz
Power	15W
Current	0.077 A (RMS)
Power Factor	0.942
THDI	9.7%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
ZD-COB015230--	LED circular up light (wide beam)	15W	3000°K
ZD-COB015240--	LED circular up light (wide beam)	15W	4000°K
ZD-COB015260--	LED circular up light (wide beam)	15W	6000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED underwater pool light

For swimming poles and fountains decorative lighting

LED efficiency and size advantage allows better placement within a compact sized body, indirect grill distributing the light eliminates glare and creates beautiful artistic effect, touch voltage is less than maximum required by NEC for maximum safety.

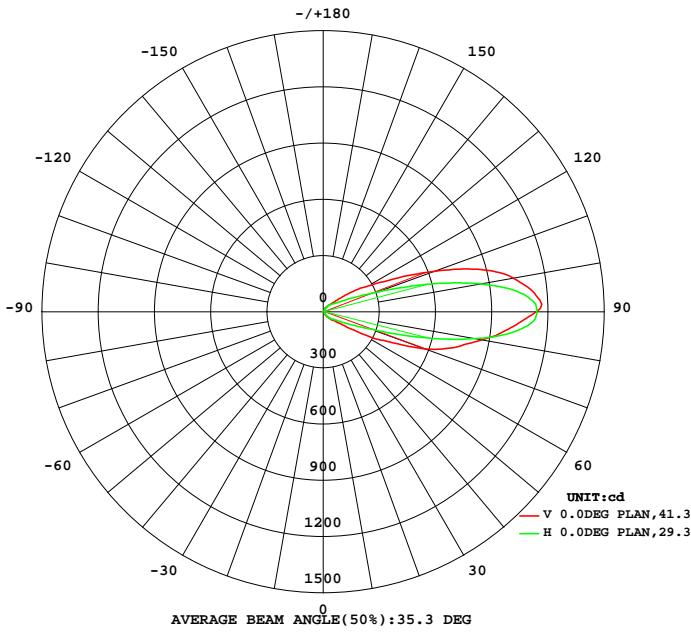


9W 69Lm/W 3000°K/RGB IP68

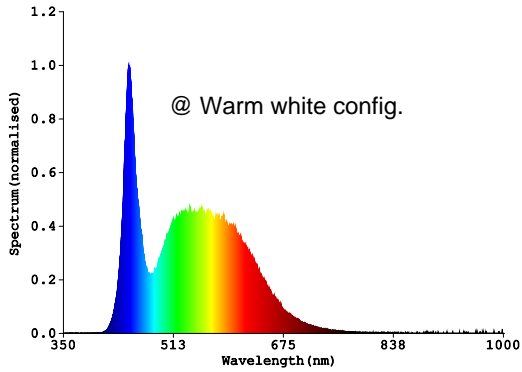
Physical	
Mass	0.78 kg
Dimensions	φ 230mm * h 40mm
Body	Stainless steel
Diffuser	Prismatic Poly Carbonate
Protection	IP68
Mounting	Wall surface mounted / M6-M8 Fischer screws or anchor bolts
Photometric	
Light Source	SMD LEDs
Total Luminous flux	617 Lm
Efficacy	68.55 Lm/W @9W (based on fixed white color)
Spread angle	41°
Spectrometric	
CCT	3216°K (RGB with auto/programmable switching available)
CRI	62.4
Electrical	
Power supply	12VDC
Power	0.75W
Current	1A (RMS)



Polar radiation distribution



Color spectrum



Art. no.	Type	Power	CCT
SPCI14-SMD009230--	LED underwater pool light	9W	3000°K
SPCI14-SMD009RGB--	LED underwater pool light	9W	RGB



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code. A galvanic isolation transformer is REQUIRED.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED underwater nozzle light

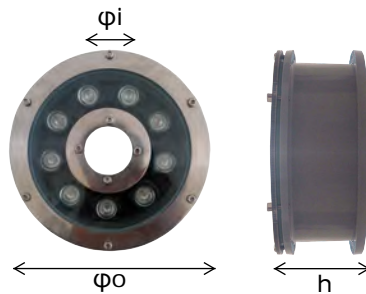
For swimming poles and fountains decorative lighting

LED efficiency and size advantage allows better placement within a compact sized body, auto switching without external controls creates beautiful artistic effect with minimum wiring, touch voltage is less than maximum required by NEC for maximum safety.



9W RGB IP68

Physical	
Mass	1.24kg
Dimensions	ϕ_o 160mm * ϕ_i 40mm * h 65mm
Body	Electrostatically coated die cast aluminum body + stainless steel ring
Emitting surface	Clear glass
Protection	IP68
Mounting	Cylindrical nozzle, M6 tightening bolt
Photometric	
Light Source	SMD LEDs
Spread angle	45°
Spectrometric	
	RGB Auto. switching
Electrical	
Power supply	12VAC , 50Hz, isolation transformer
Power	9W (max.)



Art. no.	Type	Power	CCT
SPC116-009RGB--	LED Underwater nozzle light	9W	RGB



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/ leakage protected supply as per national code. A galvanic isolation transformer is REQUIRED.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED underwater floodlight

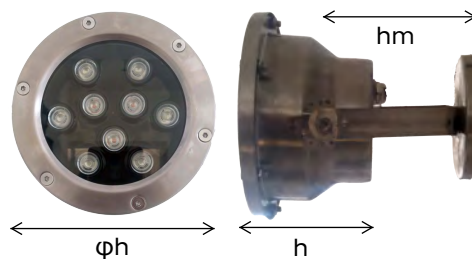
For swimming poles and fountains decorative lighting

LED efficiency and size advantage allows better placement within a compact sized body, auto switching without external controls creates beautiful artistic effect with minimum wiring, touch voltage is less than maximum required by NEC for maximum safety.



9W RGB IP68

Physical	
Mass	0.77kg
Dimensions	φ 142mm * h 80mm * hm 95mm
Body	Stainless steel
Emitting surface	Clear glass
Protection	IP68
Mounting	Wall or ground surface mounted / M6-M8 Fischer screws or anchor bolts
Photometric	
Light Source	SMD LEDs
Spread angle	45°
Spectrometric	
	RGB Auto. switching
Electrical	
Power supply	12VAC , 50Hz, isolation transformer
Power	9W (max.)



Art. no.	Type	Power	CCT
SPC115-009RGB--	LED Underwater floodlight	9W	RGB



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/ leakage protected supply as per national code. A galvanic isolation transformer is REQUIRED.

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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Wall Decorative

LED Decorative wall up/down cylindrical luminaire

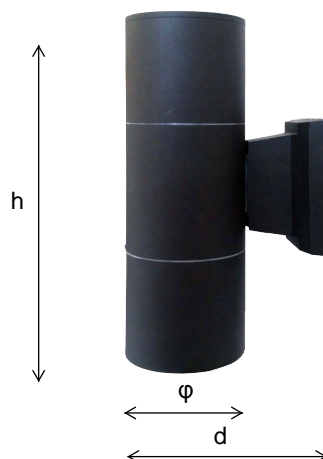
Decorative and main lighting for walls

A Fine decorative and main lighting solution for wall lighting, compatible with both classic and modern architecture, suitable for both indoors and outdoors installation. Narrow beam angle reaches high ceilings creating virtual columns. Easy installation with hidden fixing screws has no impact on ideal artistic view.

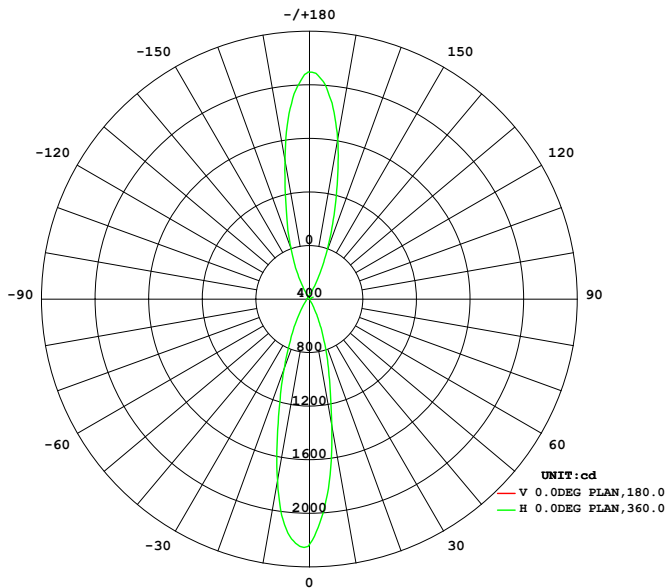


11W 3000°K 78 Lm/W IP54

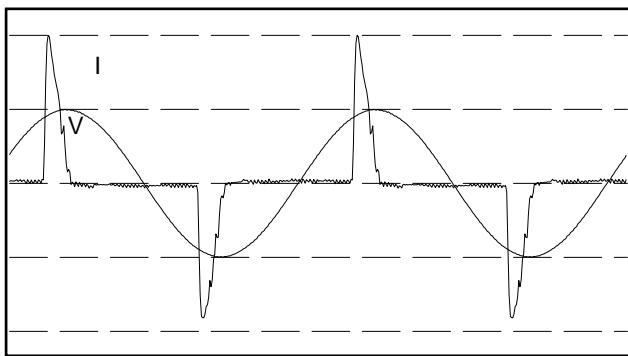
Physical	
Mass	0.895kg
Dimensions	φ 90mm * h 260mm * d 105mm
Body	electrostatically coated Aluminum tube
Reflector	Segmented Specular
Diffuser	Clear glass
Protection	IP65
Mounting	M4 Fischer screws, Surface mounted
Photometric	
Light Source	COB LEDs
Total Luminous flux	891 Lm (+/-1%) @ 11.43W
Efficacy	78 Lm/W
Spread angle	2*25°
Spectrometric	
CCT	3345°K
CRI	81.7
Electrical	
Power supply	220VAC, 50Hz
Power	11W (nominal)
Current	0.11 A (RMS)
Power Factor	0.46
THDI	182%



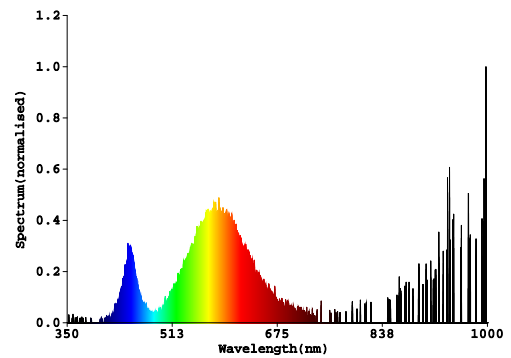
Polar radiation distribution



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SPCI08-COB010230--	LED Decorative cylindrical wall up/down light	11W	3000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED Decorative wall up/down triangular luminaire

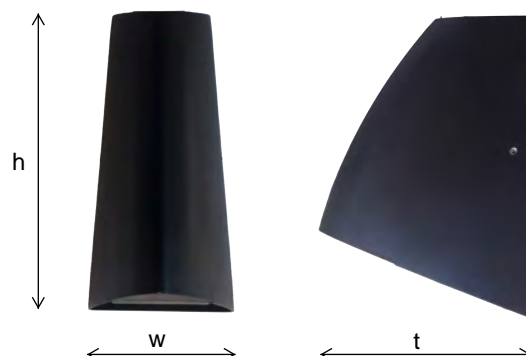
Decorative and main lighting
for walls

A Fine decorative and main lighting solution for wall lighting, compatible with modern architecture, suitable for both indoors and outdoors installation. Easy installation with hidden fixing screws has no impact on ideal artistic view.

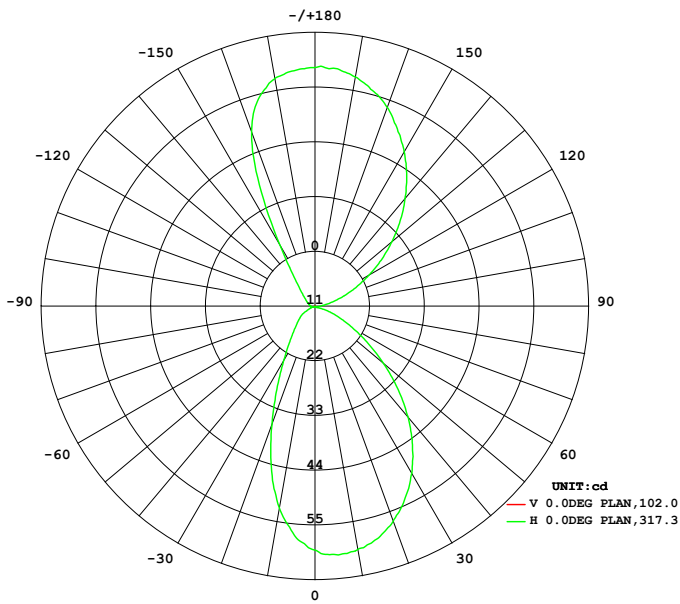


5.75W 3000°K IP54

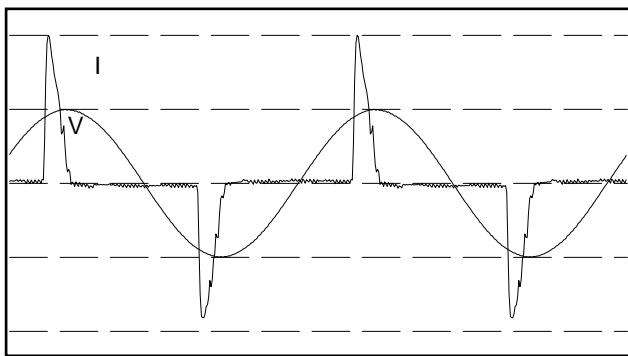
Physical	
Mass	0.365kg
Dimensions	h 170mm * w 83mm * t 130mm
Body	electrostatically coated die cast aluminum
Diffuser	Sanded glass
Protection	IP54
Mounting	M4 Fischer screws, Surface mounted
Photometric	
Light Source	High power LEDs
Total Luminous flux	143 Lm (+/-1%) @ 5.75W
Efficacy	25 Lm/W
Spread angle	2*90°
Spectrometric	
CCT	3220°K
CRI	59.3
Electrical	
Power supply	220VAC, 50Hz
Power	5.75W nominal
Current	0.055 A (RMS)
Power Factor	0.467
THDI	174.3%



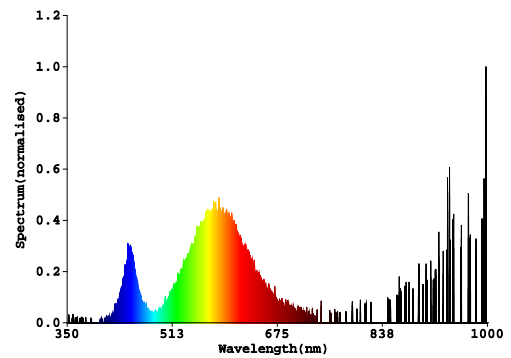
Polar radiation distribution



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SPCI09-HPL006230--	LED Decorative triangular wall up/down light	5.75W	3000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED Decorative circular Wall luminaire

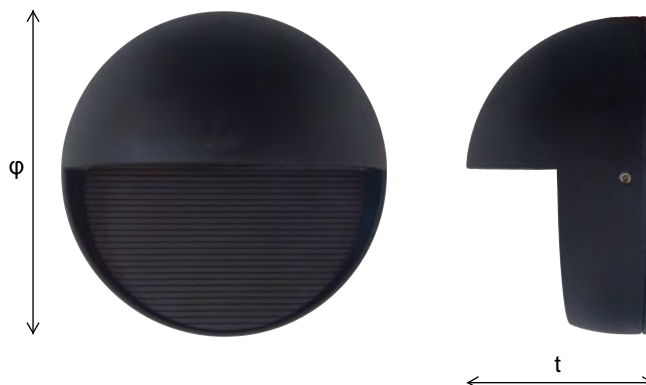
Decorative and main lighting for walls

A Fine decorative and main lighting solution for wall lighting, compatible with modern architecture, suitable for both indoors and outdoors installation. Easy installation with hidden fixing screws has no impact on ideal artistic view.

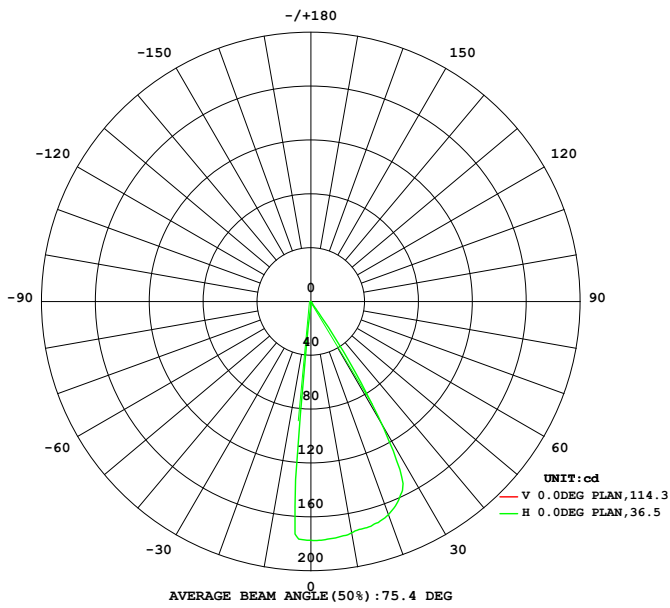


7.5W 3000°K IP54

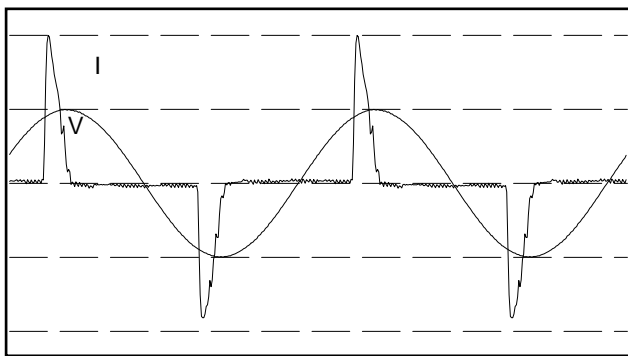
Physical	
Mass	0.515kg
Dimensions	φ 160mm * t 90mm
Body	electrostatically coated die cast aluminum
Diffuser	Clear glass
Protection	IP54
Mounting	M4 Fischer screws, Surface mounted
Photometric	
Light Source	High power LEDs
Total Luminous flux	122 Lm (+/-1%) @ 7.82W
Efficacy	15.6 Lm/W
Spread angle	36.5°
Spectrometric	
CCT	3326°K
CRI	62.6
Electrical	
Power supply	220VAC, 50Hz
Power	7.5W (nominal)
Current	0.069 A (RMS)
Power Factor	0.492
THDI	162.8%



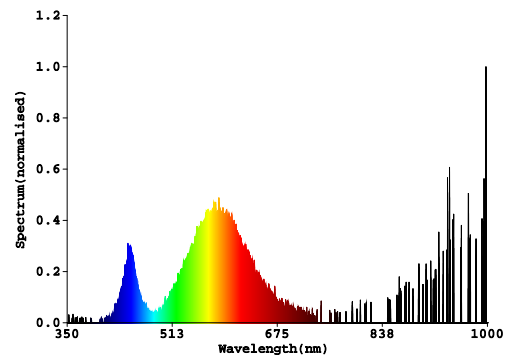
Polar radiation distribution



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
SPCI06-HPL7.5230--	LED Decorative circular wall luminaire	7.5W	3000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

LED Decorative squared Wall light

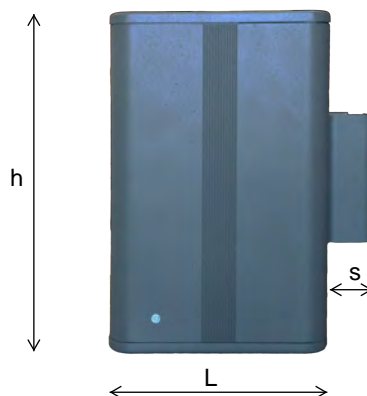
Decorative and main lighting
for walls

A Fine decorative and main lighting solution for wall lighting, compatible with both classic and modern architecture, suitable for both indoors and outdoors installation. Moderate beam angle compromises between reaches high ceilings creating virtual columns and indirectly illuminating rooms through illuminating walls. Easy installation with hidden fixing screws has no impact on ideal artistic view.

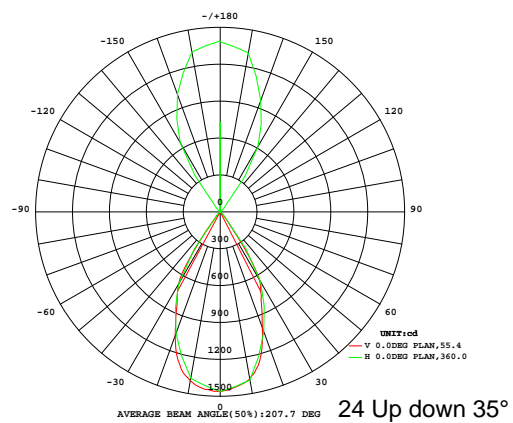
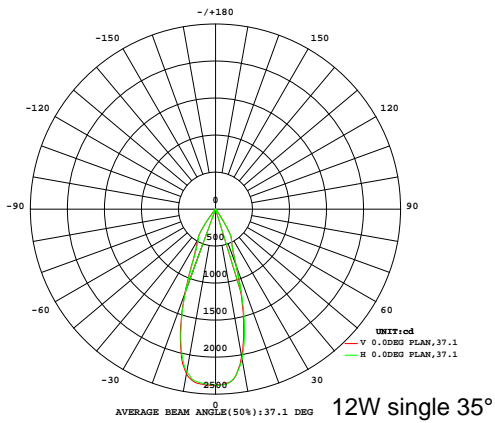
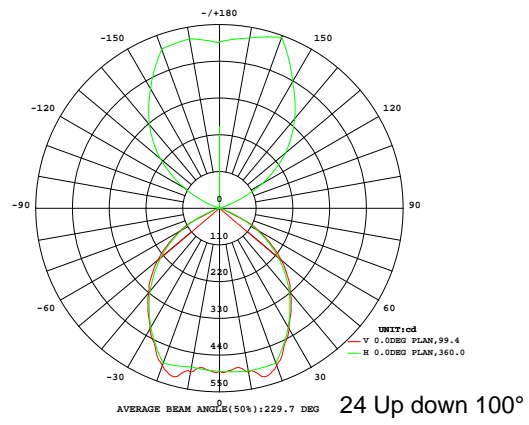
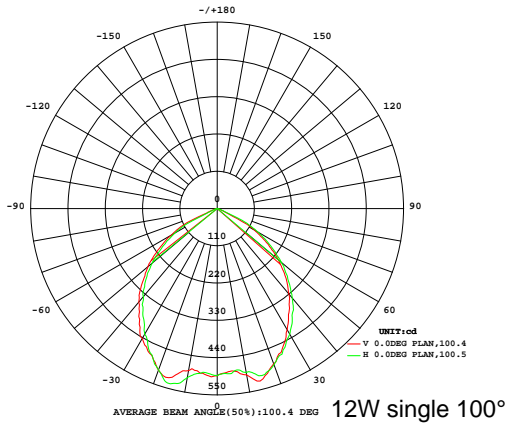


12/24W 97Lm/W 3000°K IP65

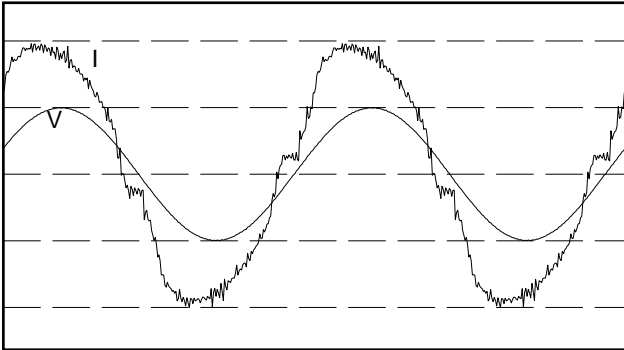
Physical	
Mass	1.935/3.275kg (single/ Up Down)
Dimensions	L 135*135mm, s 40mm, h 200/300mm (single/ Up Down)
Body	Electrostatically coated aluminum sections
Reflector	Segmented Specular
Diffuser	Textured glass
Protection	IP65, IK08
Mounting	M6 Bolts
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1036/2058 Lumen (single/ Up Down) (+/-1%)
Efficacy	96.7 Lm/W
Spread angle	37° / 100° (Per side)
Spectrometric	
CCT	3000°K
CRI	84.3
Electrical	
Power supply	220VAC, 50Hz
Power	12/24W
Current	0.054/0.109A (RMS)
Power Factor	0.965
THDI	9.9%



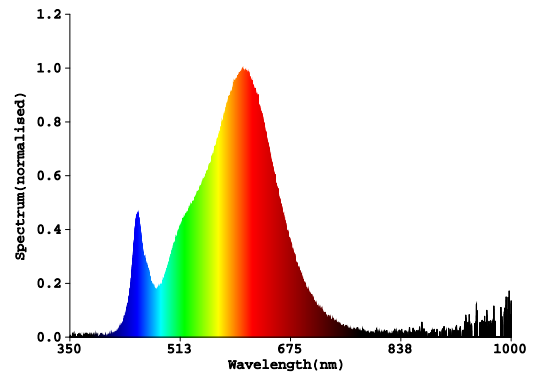
Polar radiation distribution



Electrical oscilloscopy



Color spectrometry



Art. no.	Type	Power	CCT
CSQR1-COB012230--	LED Wall down light squared 100° spread	12W	3000°K
CSQR2-COB012230--	LED Wall down light squared 35° spread	12W	3000°K
CSQUDR1-COB024230--	LED Wall up down light squared 100° spread	24W	3000°K
CSQUDR2-COB024230--	LED Wall up down light squared 35° spread	24W	3000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED wall washer

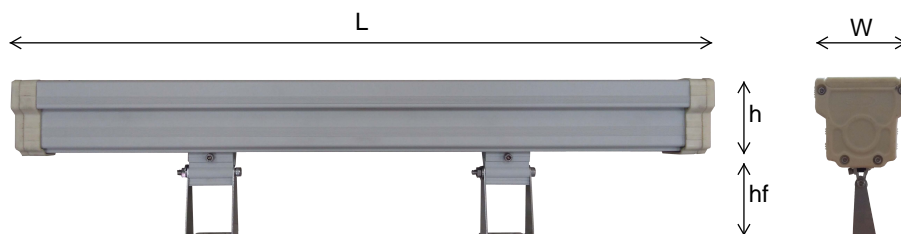
For decorative outdoors
building lighting

LED offers an optimum solution for wall washer, since it offers better efficacy than conventional solutions along with a wide range of white color shades and powers. This linear variant is most suitable for outdoors wall decoration. Lenses enable a narrow beam that can cover heights up to 30 meters with beautiful artistic effect

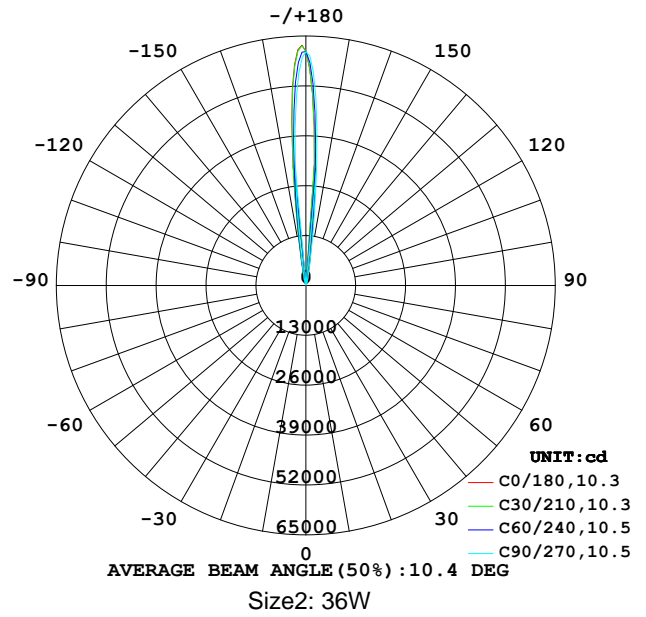
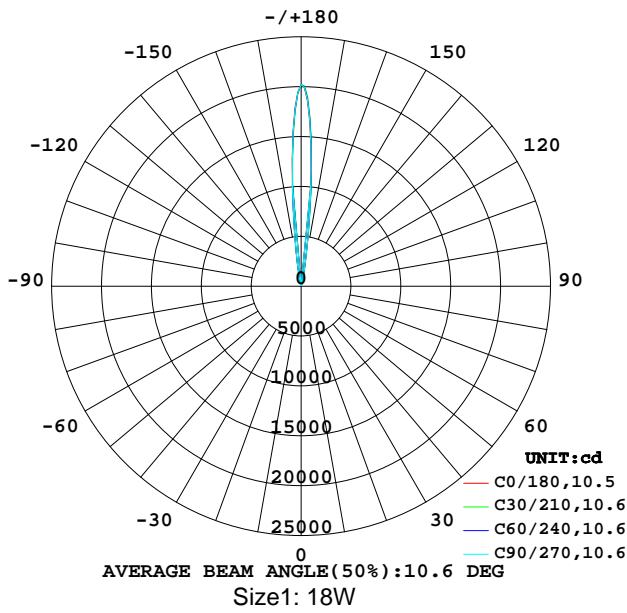


18/36W 92Lm/W 3000°K IP67

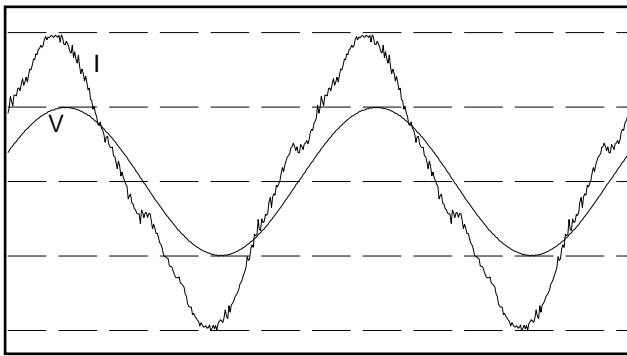
Physical	
Mass	1.75/2.82kg (Size1/Size2)
Dimensions	L 695/395mm (Size1/Size2) * W 85mm * h 78mm * hf 90mm
Body	Electrostatically coated aluminum sections + stainless steel supports
Diffuser	Clear glass, tempered, 4mm thickness
Protection	IP67, IK08
Mounting	Free Swivel arms, up to +/- 70°, M6 anchor bolts / Screws
Photometric	
Light Source	SMD LEDs
Total Luminous flux	1657/3590 Lumen @ 18.1/39.2W (+/-1%)
Efficacy	91.58 Lm/W
Spread angle	10.5°
Spectrometric	
CCT	3000-6000°K / RGB with auto switching (Size2 only)
CRI	70
Electrical	
Power supply	220VAC, 50Hz
Power	18/36W
Current	0.185 A (RMS)
Power Factor	0.972
THDI	7%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
DW9-SMD018230--	LED Wall washer 30cm	18W	3000°K
DW9-SMD018240--	LED Wall washer 30cm	18W	4000°K
DW9-SMD018260--	LED Wall washer 30cm	18W	6000°K
DW18-SMD036230--	LED Wall washer 60cm	36W	3000°K
DW18-SMD036240--	LED Wall washer 60cm	36W	4000°K
DW18-SMD036260--	LED Wall washer 60cm	36W	6000°K
DW18-SMD036RGB--	LED Wall washer 60cm	36W	RGB

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED stairs grill

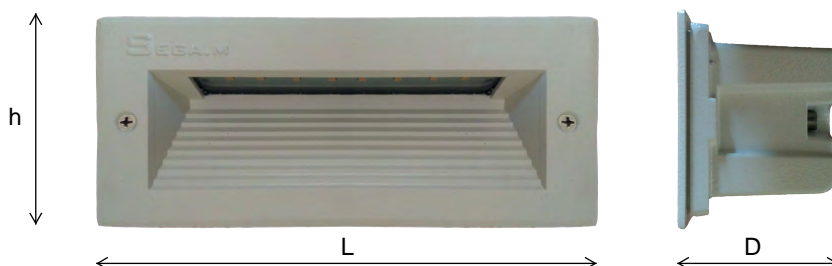
For front and side mounting, general wall bottom mounting and corridors.

LED efficiency and size advantage allows better placement within a compact sized body, indirect grill distributing the light eliminates glare and thus it could be used either for direct front illumination (facing stairs climber) or side illumination (wall / parapet). Power saving is best compared to conventional lighting.

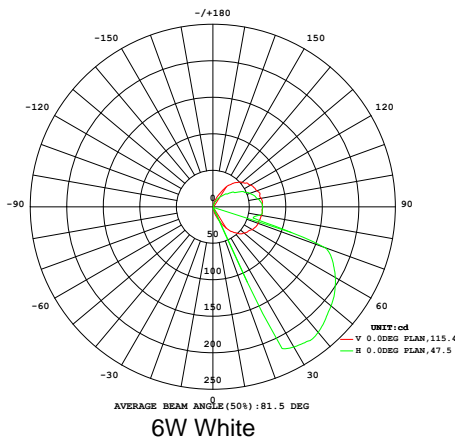
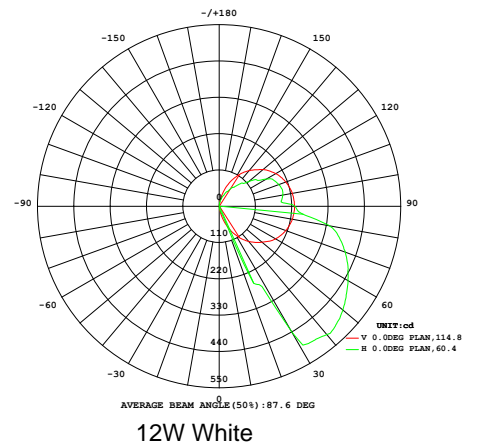
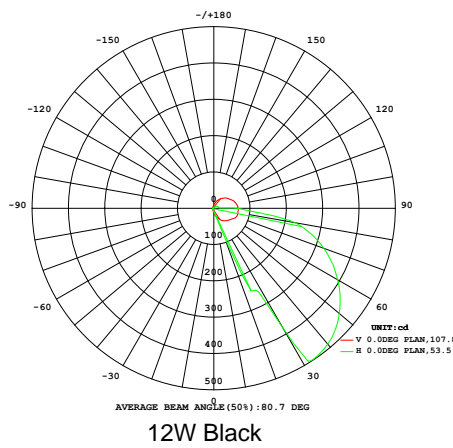
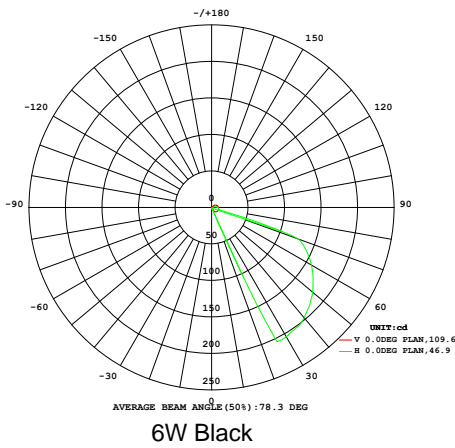


6/12W 85Lm/W 3000-6000°K IP65

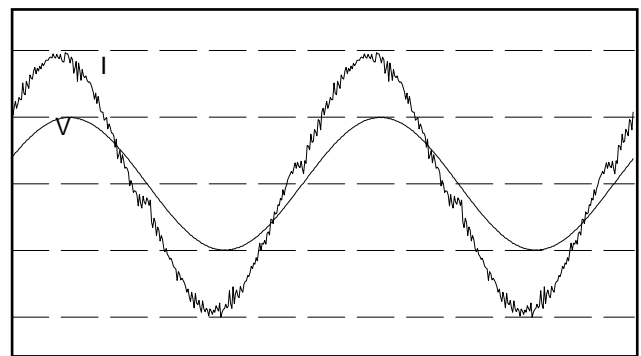
Physical	
Mass	0.695/0.885kg (Size1; 6W / Size2; 12W)
Dimensions	h 89mm * D 66mm, L 170/270mm (Size1; 6W / Size2; 12W)
Body	Electrostatically coated die cast aluminum, ABS Box
Diffuser	Clear glass
Protection	IP65, IK08
Mounting	M6 Bolts / Wall recessed box
Photometric	
Light Source	SMD LEDs
Total Luminous flux	251.9/348.7Lm (Size1:Black/White), 616.6/992.8Lm (Size2:Black/White)
Efficacy	41-83 Lm/W (coating color and size dependent)
Spread angle	Variant dependent
Spectrometric	
CCT	3000-6000°K
CRI	83.1
Electrical	
Power supply	220VAC, 50Hz
Power	6/12W
Current	0.035 / 0.055A (RMS)
Power Factor	0.965
THDI	6-15%



Polar radiation distribution



Electrical oscilloscopy



Art. no.	Type	Power	CCT
MINC17-SMD006230--	LED stairs grill size1 (170mm)	6W	3000°K
MINC17-SMD006240--	LED stairs grill size1 (170mm)	6W	4000°K
MINC17-SMD006260--	LED stairs grill size1 (170mm)	6W	6000°K
MINC27-SMD012230--	LED stairs grill size2 (270mm)	12W	3000°K
MINC27-SMD012240--	LED stairs grill size2 (270mm)	12W	4000°K
MINC27-SMD012260--	LED stairs grill size2 (270mm)	12W	6000°K



Owing to the special nature of application (water flooding possible) it is strongly recommended to supply this product through Earth fault/leakage protected supply as per national code.

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General Purpose

Surface mounted Plastic Bulkhead

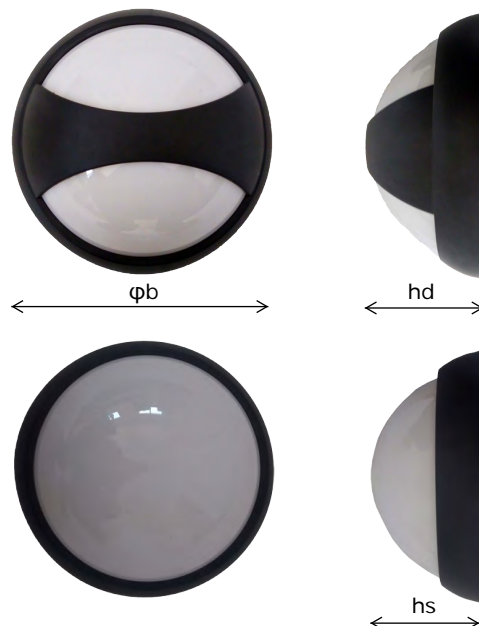
Decorative and main lighting
for walls and ceilings and
outdoors in general



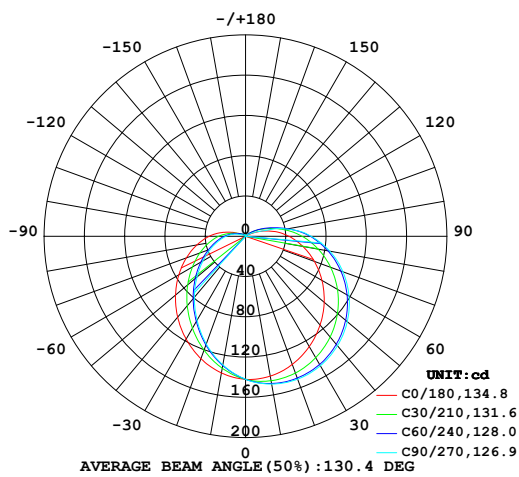
A modular solution for various indoors and outdoors situations, can be used for main lighting e.g. for corridors, stairwells, balconies, entrances, or as a decorative solution. The universal E27 Bulb base available both in single and dual configuration offers flexibility and liberty of choice for various lighting options at will.

E27 Bulb base (single/dual) IP54

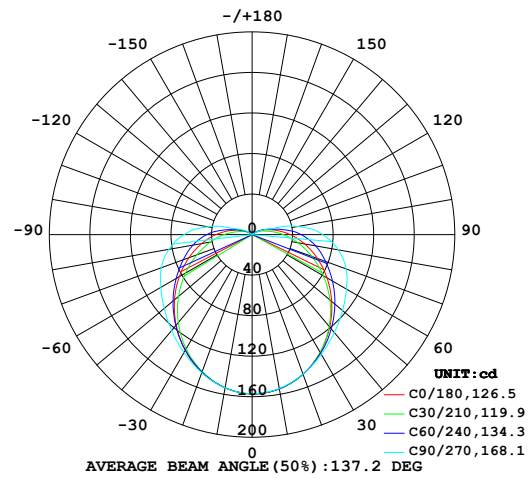
Physical	
Mass	0.7 - 0.815kg
Dimensions	φb 270mm * hs 120mm / hd 126mm
Body	ABS
Diffuser	Milky Poly carbonate
Protection	IP54, IK08
Mounting	M4 Fischer screws, Surface mounted
Photometric	
Light Source	E27 Bulb(s) up to 15cm length
LOR	As per Variant (measurements are based on 12W LED bulb, black body)
Spread angle	As per Variant
Spectrometric	
	As per installed Bulb(s)
Electrical	
Power supply	220VAC, 50/60Hz
Power	Up to 100W for single E27, 200W for dual



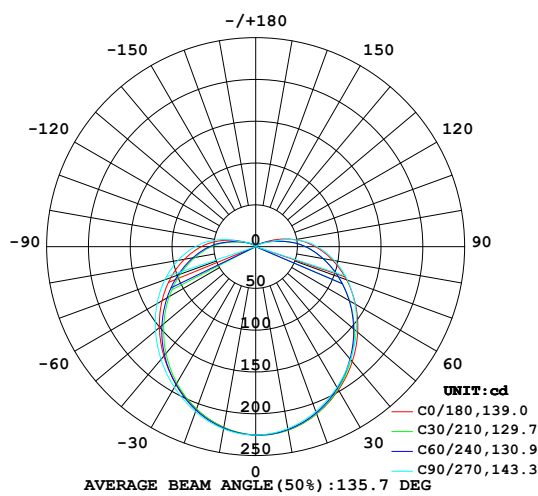
Polar radiation distribution



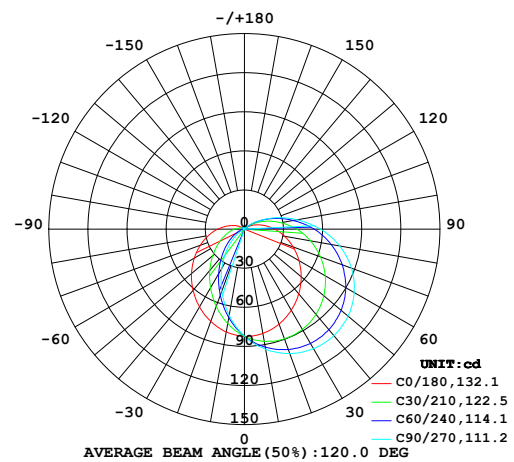
Single window 1*E27
LOR 51.6%



Double window 2*E27
LOR 29.8%



Single window 2*E27
LOR 42.2%



Half window 1*E27
LOR 31.0%



Art. no.	Type	Base	Var.
RB1L-E2700000001	Plastic Bulkhead single window	E27	White
RB1L-E2700000002	Plastic Bulkhead single window	E27	Black
RB2L-E2700000001	Plastic Bulkhead single window	2*E27	White
RB2L-E2700000002	Plastic Bulkhead single window	2*E27	Black
RBD2L-E2700000001	Plastic Bulkhead double window	2*E27	White
RBD2L-E2700000002	Plastic Bulkhead double window	2*E27	Black
RBE1L-E2700000001	Plastic Bulkhead half window	E27	White
RBE1L-E2700000002	Plastic Bulkhead half window	E27	Black

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Shielded Aluminum Bulkhead luminaire

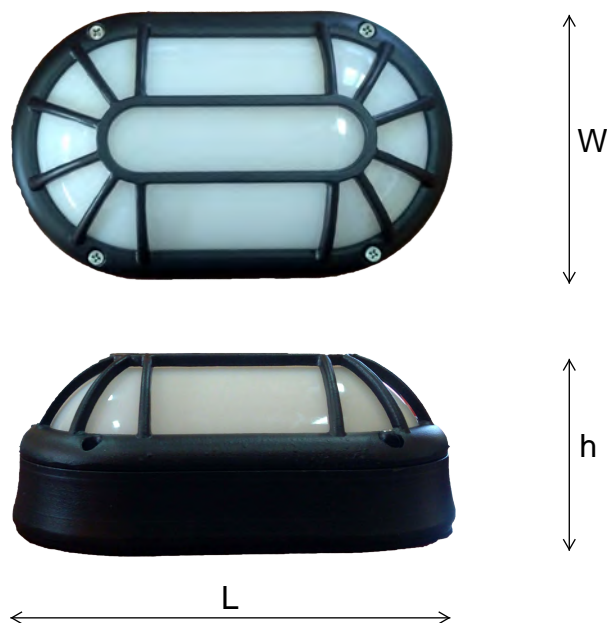
Heavy duty luminaire for both decorative and general purpose lighting

Designed for rugged outdoor applications yet with an artistic touch, Aluminum bulkhead in various shapes serves all purposes. Design and selection of materials is suitable for anti-vandal requirements. The universal E27 Bulb base option offers flexibility and liberty of choice for various lighting options at will.



E27 Bulb base / LED 12W 3000/6000°K IP65

Physical	
Mass	0.8-1.0kg
Dimensions	L 220 * W 140 * h 80mm
Body	Electrostatically coated die cast aluminum
Diffuser	Polycarbonate - Milky
Protection	IP65
Mounting	Wall or ceiling mounting/ M4-M6 Fischer screws or bolts
Photometric	
Light Source	E27 Bulb(s) up to 15cm length / SMD LED PCB 12W
LOR	As per Variant
Spread angle	As per Variant
Spectrometric	
	As per installed Bulb(s) / 3000/6000K° LED
Electrical	
Power supply	220VAC, 50Hz
Power	Up to 100W for single E27 / 12W LED





Eyelid



Net



Wave



Torch

Art. no.	Type	Power	Var.
KTLA02H-E27000000--	Aluminum Bulkhead (eyelid)	E27	-
KTLA02H-SMD012230--	LED Aluminum Bulkhead (eyelid)	12W	3000°K
KTLA02H-SMD012260--	LED Aluminum Bulkhead (eyelid)	12W	6000°K
KTLA04H-E27000000--	Aluminum Bulkhead (net)	E27	-
KTLA04H-SMD012230--	LED Aluminum Bulkhead (net)	12W	3000°K
KTLA04H-SMD012260--	LED Aluminum Bulkhead (net)	12W	6000°K
KTLA05H-E27000000--	Aluminum Bulkhead (wave)	E27	-
KTLA05H-SMD012230--	LED Aluminum Bulkhead (wave)	12W	3000°K
KTLA05H-SMD012260--	LED Aluminum Bulkhead (wave)	12W	6000°K
KTLA06V-E27000000--	Aluminum Bulkhead (torch)	E27	-
KTLA06V-SMD012230--	LED Aluminum Bulkhead (torch)	12W	3000°K
KTLA06V-SMD012260--	LED Aluminum Bulkhead (torch)	12W	6000°K

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LED Floodlight (Slim)

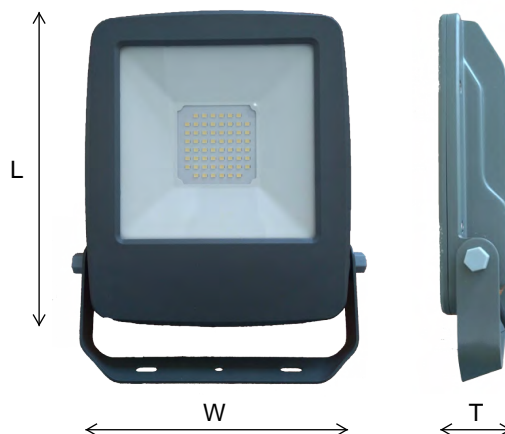
For industrial yards, bill boards, small sport courts and general outdoors lighting

Unlike typical design of LED floodlights, this design uses SMD LEDs, enhancing thermal performance and raising efficacy without requiring large heat sink thus achieving lightweight and eliminating glare as well.

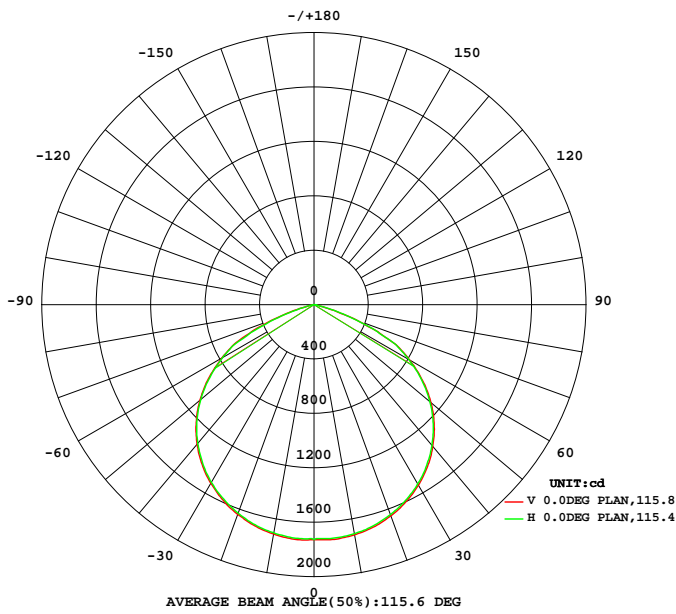


50W 96Lm/W 6000°K IP65

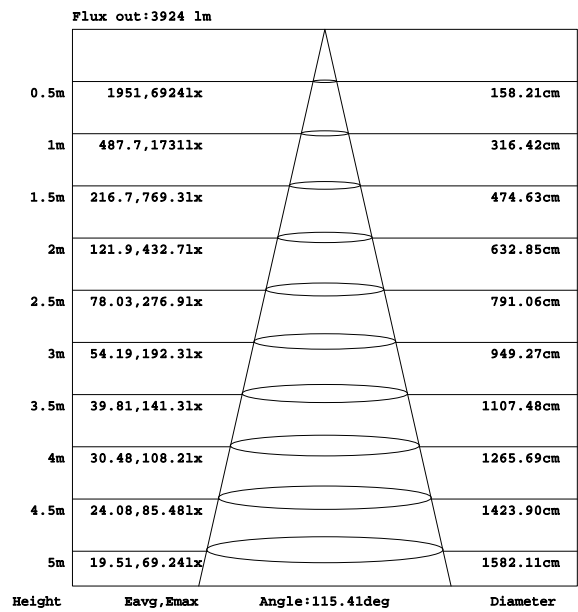
Physical	
Mass	1.235 kg
Dimensions	L 205mm * W 175mm * T 50mm
Body	Electrostatically coated die cast aluminum
Diffuser	Clear glass
Protection	IP65, IK08
Mounting	Wall or ceiling mounted, M6 Bolts / Fischer Screws, Azimuth 360°, Altitude +/- 100°
Photometric	
Light Source	SMD LEDs
Total Luminous flux	4827 Lumen (+/-1%) @ 51W
Efficacy	96.64 Lm/W
Spread angle	115.6°
Spectrometric	
CCT	6419°K
CRI	81.6
Electrical	
Power supply	220VAC, 50Hz
Power	50W
Current	0.239 A (RMS)
Power Factor	0.971
THDI	22.6%



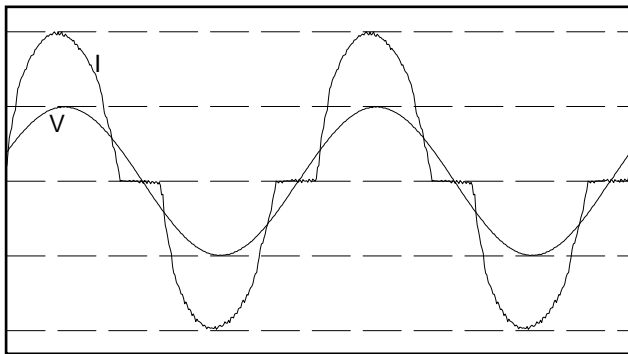
Polar radiation distribution



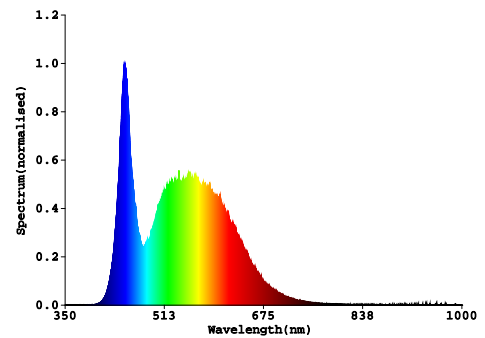
Horizontal illuminance



Electrical oscillography



Color spectrum



Art. no.	Type	Power	CCT
FLS50-SMD050260--	LED Floodlight (slim)	50W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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LED Floodlight (Slim)

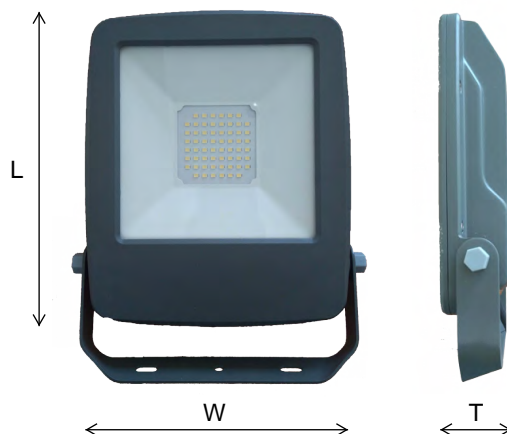
For industrial yards, bill boards, small sport courts and general outdoors lighting

Unlike typical design of LED floodlights, this design uses SMD LEDs, enhancing thermal performance and raising efficacy without requiring large heat sink thus achieving lightweight and eliminating glare as well.

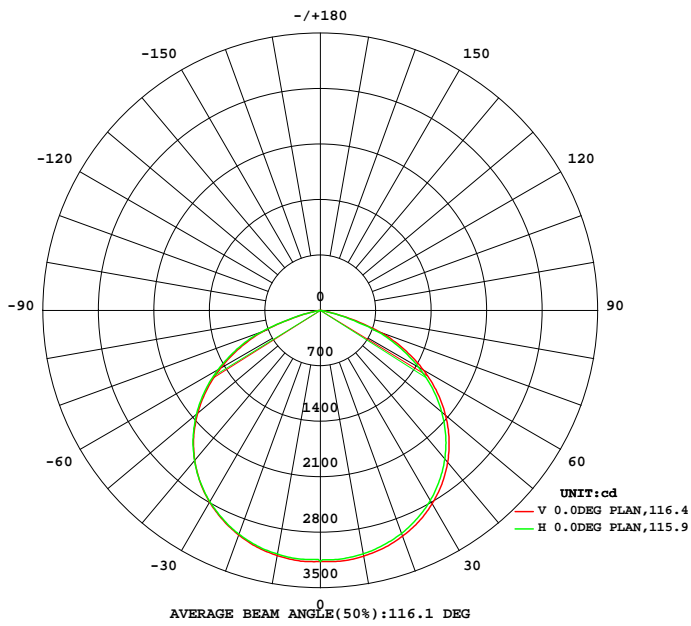


100W 95Lm/W 6000°K IP65

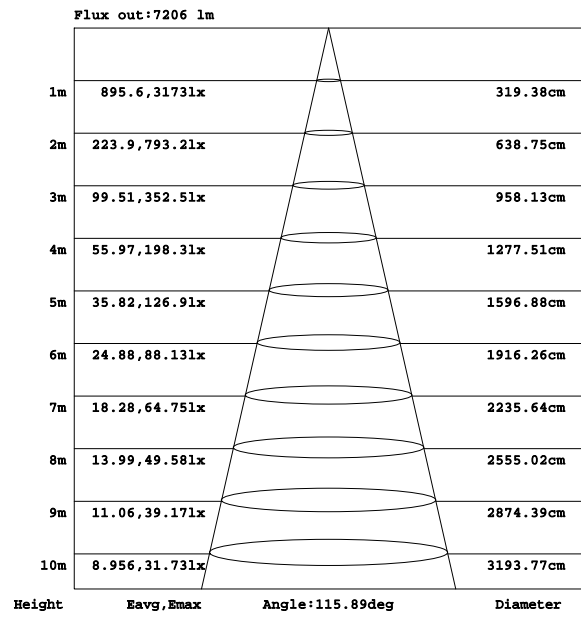
Physical	
Mass	1.5 kg
Dimensions	L 260mm * W 220mm * T 50mm
Body	Electrostatically coated die cast aluminum
Diffuser	Clear glass
Protection	IP65, IK08
Mounting	Wall or ceiling mounted, M6 Bolts / Fischer Screws, Azimuth 360°, Altitude +/- 100°
Photometric	
Light Source	SMD LEDs
Total Luminous flux	9043 Lumen (+/-1%) @ 95.5W
Efficacy	94.69 Lm/W
Spread angle	115.6°
Spectrometric	
CCT	6452°K
CRI	81.7
Electrical	
Power supply	220VAC, 50Hz
Power	100W
Current	0.449 A (RMS)
Power Factor	0.969
THDI	24.8%



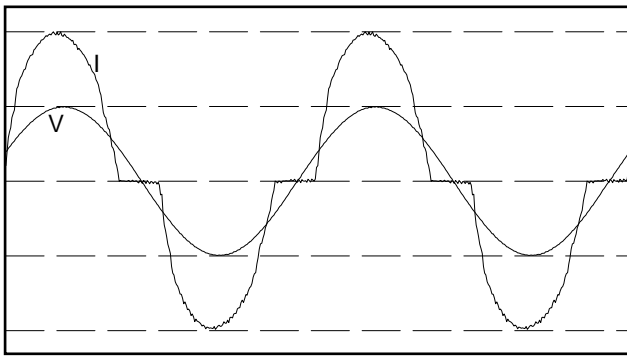
Polar radiation distribution



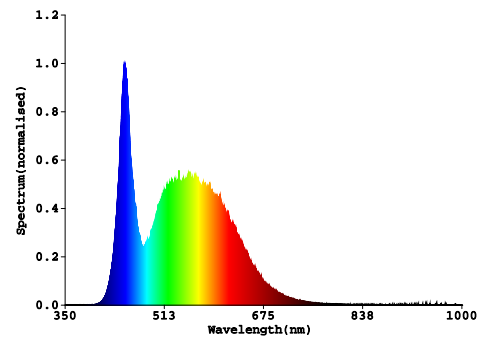
Horizontal illuminance



Electrical oscilloscopy



Color spectrum



Art. no.	Type	Power	CCT
FLS100-SMD100260--	LED Floodlight (slim)	100W	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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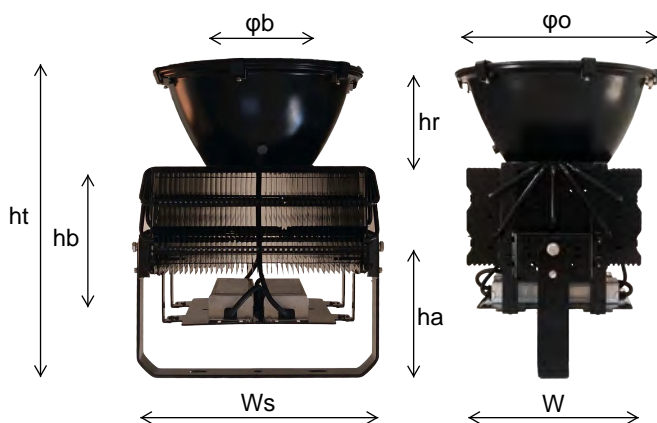
LED Sports Floodlight

For stadiums, large outdoors and indoors auditoriums and all sports illumination needs

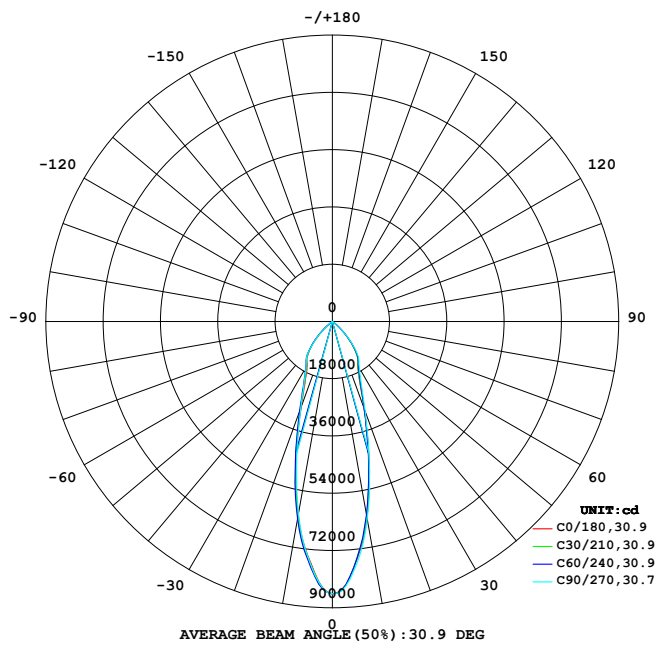
Designed originally for large areas outdoors lighting. Narrow spread angle guarantees best performance out of high masts overlooking large areas i.e. football pitches and also high altitude pendent configuration. Reflector chamber equipped with air vent prevents build up of pressure inside compartment due to operating heat. Large area heat sink featuring totally sealed coolant filled pipes guarantees best heat dissipation. Driver placement allows easy maintenance and ensures minimum heat transfer from heat sink to drivers. Rugged adaptable construction allows precise adjustment in all directions for high mast mounting and pendent holder makes for extra safety or allowing pendent configuration.

500W 92Lm/W 3000-6000°K IP65

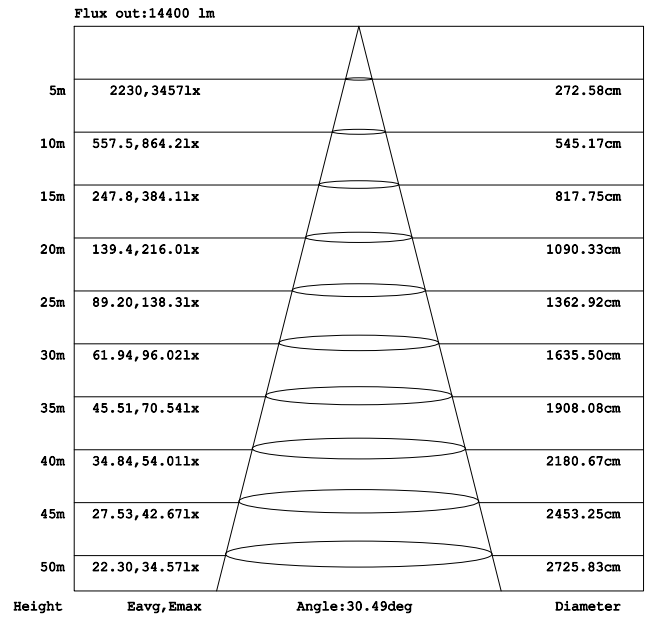
Physical	
Mass	10.85kg
Dimensions	ϕ_o 365mm * ϕ_b 190mm, hr 160mm, hb 240mm, ha 215mm , ht 505mm, W 285mm * Ws 420mm
Body	Electrostatically coated die cast aluminum
Reflector	Segmented specular
Diffuser	Clear glass
Protection	IP65, IK08
Mounting	3*M10/12 Bolts on swivel arm +/-100° or pendent
Photometric	
Light Source	SMD LEDs 3030
Total Luminous flux	42666 Lumen (+/-1%) @ 466.5W
Efficacy	91.5 Lm/W
Spread angle	31°
Spectrometric	
CCT	3000-6000°K
CRI	83.2
Electrical	
Power supply	220VAC, 50Hz, Max. Limits 100-305VAC
Power	500W nominal
Current	2.155 A (RMS)
Power Factor	0.987
THDI	10.5%



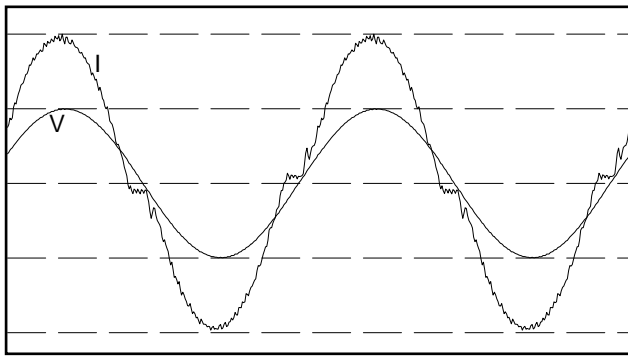
Polar radiation distribution



Horizontal illuminance



Electrical oscilloscopy



Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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5. Solar PV all-in-one lighting

All-in-one Solar Powered Wall mounted Luminaire, 5Wp PV

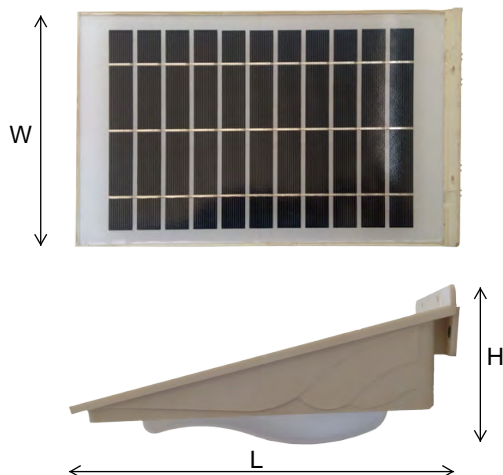
For general and decorative wall lighting

With quick and easy installation without the need to extend wiring and optical control equipment, designed to solve the enduring problem of wall and fence lighting for residential and small business areas. An install-and-forget product is your perfect solution, offering adequate lighting for heights up to 3 meters and offset up to 6 meters providing good decorative illumination for the wall/fence and the sidewalk up to 2 meters wide.

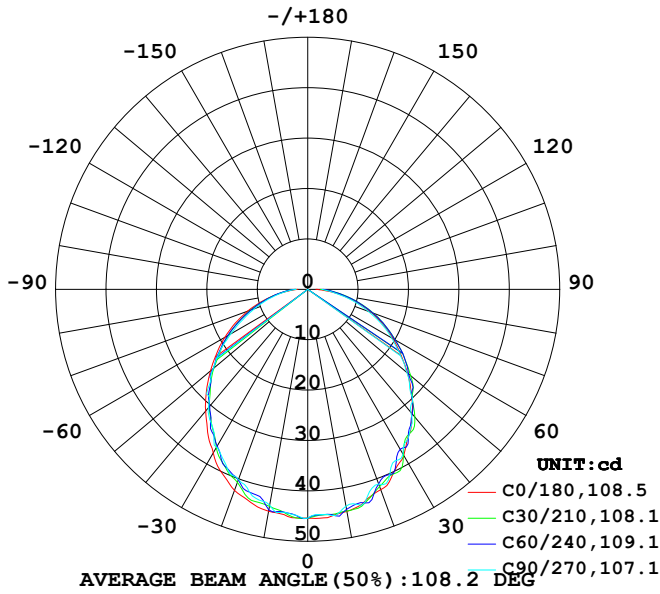


5Wp PV 12h endurance 3000/6500°K IP65

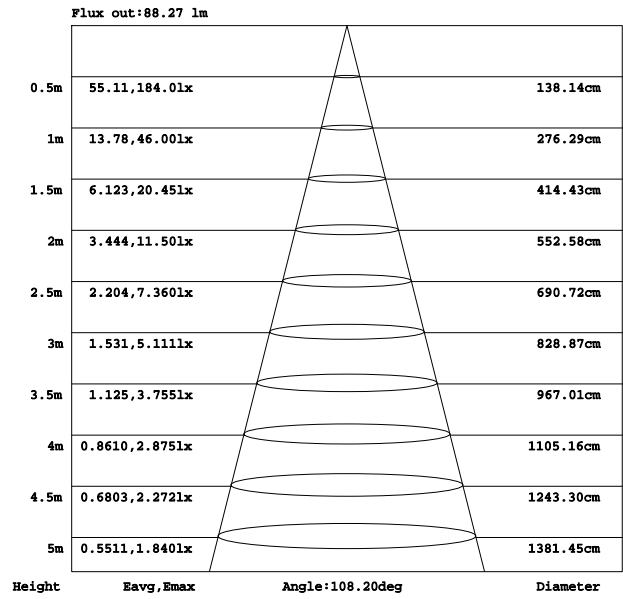
Physical	
Mass	1.05 kg
Dimensions	L 290mm * W 190mm * H 115mm
Body	ABS (UV Resistant), different colors available.
Diffuser	Prismatic Polycarbonate (UV Resistant)
PV window	Tempered Glass, inclined at 15°
Protection	IP65, Outdoor installation (non shaded area)
Mounting	Wall side mounted, M4 Fischer Screws
Photometric	
Light Source	SMD LEDs
Total Luminous flux	125-150 Lumen (at full power)
Spread angle	105-110°
Spectrometric	
CCT	3000/6500°K
CRI	84
Electrical	
Power supply	Polycrystalline PV, 5W Peak
Battery bank	Li-ion, 3.6V, 7.5Ah total
Expected endurance	12h average, 2 days backup
Features	Auto Power ON/OFF with sunset/sunrise



Polar radiation distribution



Horizontal illuminance



Art. no.	Type	Power	CCT
FLSC-SMD005230--	All-in-one PV Wall luminaire	5Wp PV	3000°K
FLSC-SMD005260--	All-in-one PV Wall luminaire	5Wp PV	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

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All-in-one Solar Powered Lantern, 4Wp PV

For wall and Landscape Lighting

With quick and easy installation without the need to extend wiring and optical control equipment, designed to solve the enduring problem of wall and fence lighting and landscape for residential and small business areas. An install-and-forget product is your perfect solution, offering adequate decorative illumination for the wall/fence and the sidewalk up to 2 meters wide.

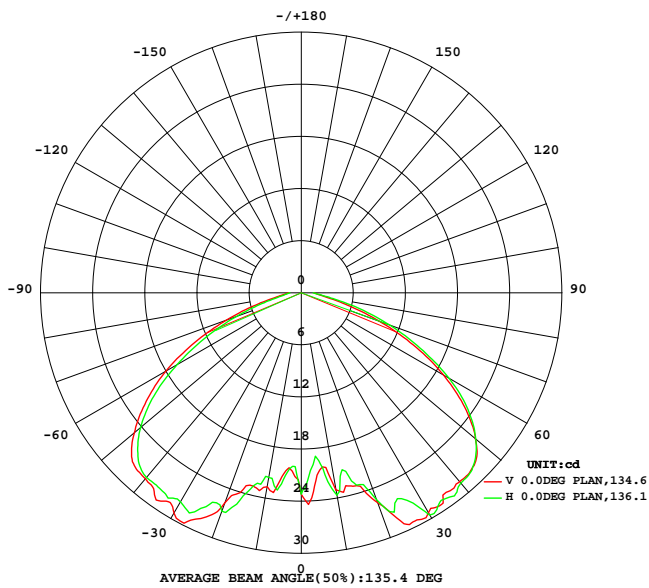


4Wp PV 12h endurance 3000/6500°K IP54

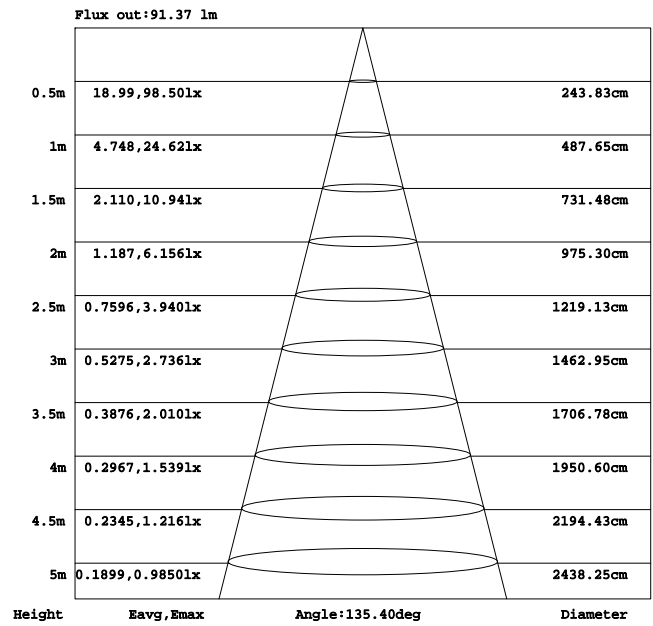
Physical	
Mass	1.235 kg (head)
Dimensions	φh 295mm*φb 190mm*h 400-1000mm (for base/bollard model) φb 270mm*h2500-3000mm octagon shaped (for poles)
Body	ABS (UV resistant) + Aluminum Section tube φ75mm (for bollards/poles)+ Aluminum base (optional)
Diffuser	Prismatic Poly carbonate (UV resistant)
PV window	Tempered Glass, 0° inclination
Protection	IP54
Mounting	Ground or wall side, M4 Fischer Screws / M4-M8 Anchor bolts
Photometric	
Light Source	SMD LEDs
Total Luminous flux	100 Lumen (at full power)
Spread angle	135.4°
Spectrometric	
CCT	3000/6500°K
CRI	84
Electrical	
Power supply	Polycrystalline PV, 4W Peak
Battery bank	Li-ion, 3.6V, 7.5Ah total
Expected endurance	12h average, 2 days backup
Features	Auto Power ON/OFF with sunset/sunrise



Polar radiation distribution



Horizontal illuminance



Art. no.	Type	Power	CCT
FSC-SMD004230--	All-in-one PV Lantern	4Wp PV	3000°K
FSC-SMD004260--	All-in-one PV Lantern	4Wp PV	6000°K
FSCC-SMD004230--	All-in-one PV wall side Lantern	4Wp PV	3000°K
FSCC-SMD004260--	All-in-one PV wall side Lantern	4Wp PV	6000°K
FSCB50-SMD004230--	All-in-one PV bollard 50cm	4Wp PV	3000°K
FSCB50-SMD004260--	All-in-one PV bollard 50cm	4Wp PV	6000°K
FSCB75-SMD004230--	All-in-one PV bollard 75cm	4Wp PV	3000°K
FSCB75-SMD004260--	All-in-one PV bollard 75cm	4Wp PV	6000°K
FSCB100-SMD004230--	All-in-one PV bollard 100cm	4Wp PV	3000°K
FSCB100-SMD004260--	All-in-one PV bollard 100cm	4Wp PV	6000°K
SCP250-SMD004230--	All-in-one PV pole 2.5m	4Wp PV	3000°K
SCP250-SMD004260--	All-in-one PV pole 2.5m	4Wp PV	6000°K
SCP300-SMD004230--	All-in-one PV pole 3m	4Wp PV	3000°K
SCP300-SMD004260--	All-in-one PV pole 3m	4Wp PV	6000°K
DSCP250-SMD004230--	All-in-one PV double pole 2.5m	4Wp PV	3000°K
DSCP250-SMD004260--	All-in-one PV double pole 2.5m	4Wp PV	6000°K
DSCP300-SMD004230--	All-in-one PV double pole 3m	4Wp PV	3000°K
DSCP300-SMD004260--	All-in-one PV double pole 3m	4Wp PV	6000°K
TSCP250-SMD004230--	All-in-one PV triple pole 2.5m	4Wp PV	3000°K
TSCP250-SMD004260--	All-in-one PV triple pole 2.5m	4Wp PV	6000°K
TSCP300-SMD004230--	All-in-one PV triple pole 3m	4Wp PV	3000°K
TSCP300-SMD004260--	All-in-one PV triple pole 3m	4Wp PV	6000°K

Sources for software simulation for installation (*.IES, *.LDT files) and advanced test results are available on request

Performance described above requires proper installation according to internationally recognized codes and within mentioned operational limitations.

Any properties not directly affecting photometric, spectrometric or electrical performance are liable to change without prior notice.

6. Emergency modules

LED Luminaires Emergency module (non-maintained)

For emergency backup needs for LED luminaires

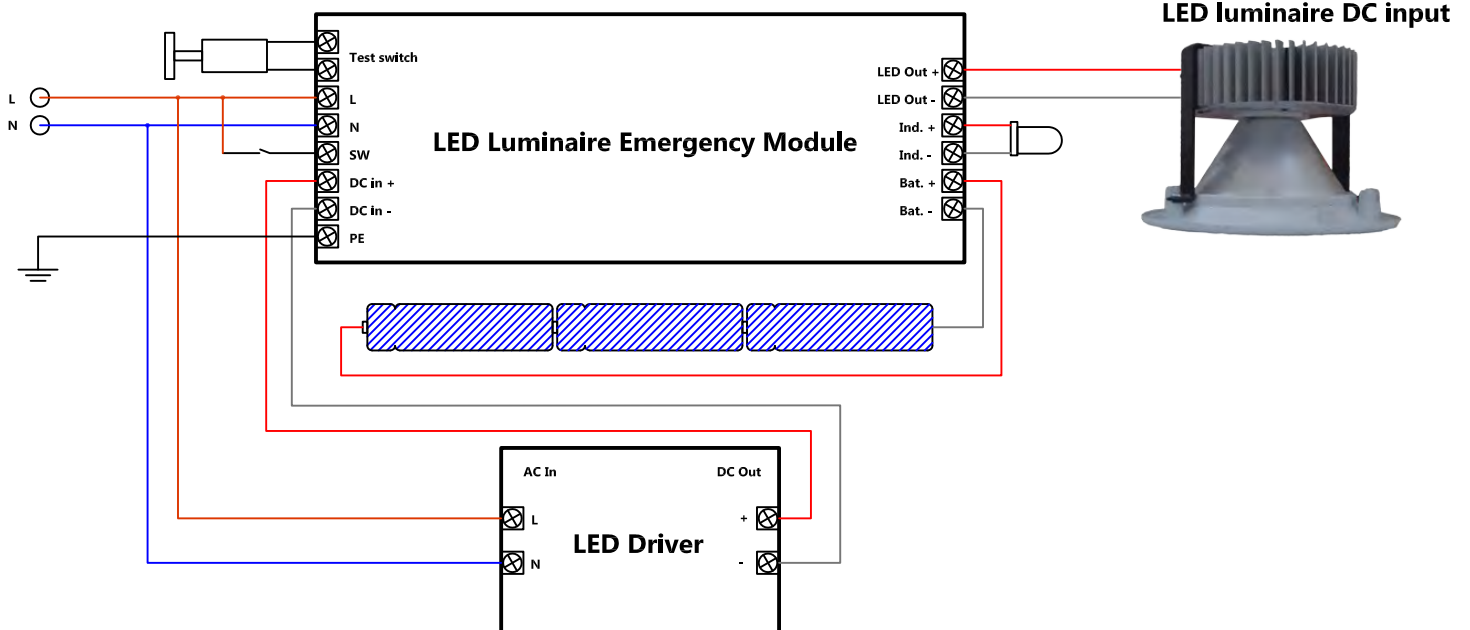
Li-ion battery technology offers ultimate performance in emergency applications, high energy to mass/size ratio allows compact size and easy embedding within systems. Li-ion also is not bounded by traditional memory effect shortages of Ni-Cd batteries making it an ideal solution for unstable grid conditions. DC Output is compatible with a wide range of LED Drivers.



Up to 40W DC Output IP40

Input	85-277VAC
Output	15-50VDC
Battery	Li-ion 11.1V 3000-12000mAh
Running temperature	0-55°C
Startup Charging time	24h
Expected backup time	1.5-6 hours as per load and battery capacity
Features	LED Indicator, Test switch, Battery protection

Connection Schematic



LED Lamps Emergency module (non-maintained)

For emergency backup needs for replaceable lamp luminaires

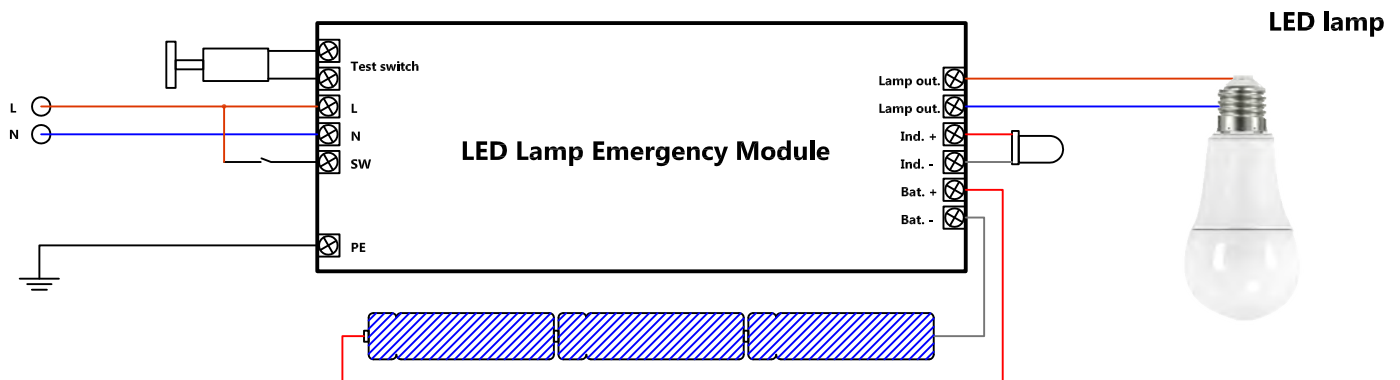
Li-ion battery technology offers ultimate performance in emergency applications, high energy to mass/size ratio allows compact size and easy embedding within systems. Li-ion also is not bounded by traditional memory effect shortages of Ni-Cd batteries making it an ideal solution for unstable grid conditions. AC output makes a one package modular solution for replaceable lamps luminaires



Up to 40W AC Output IP40

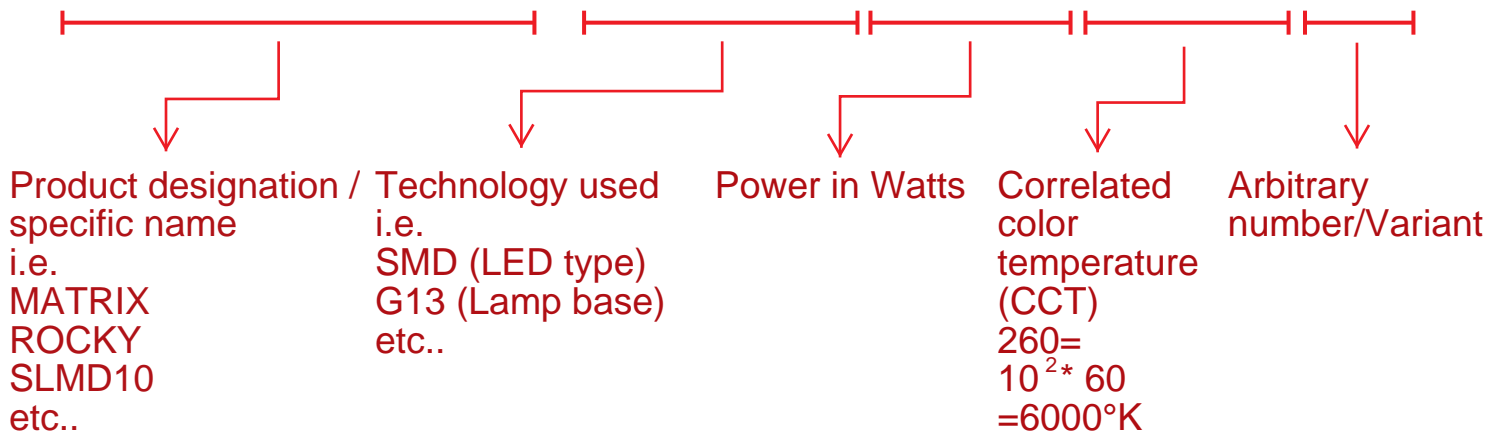
Input	85-277VAC
Output	220VAC
Battery	Li-ion 11.1V 3000-12000mAh
Running temperature	0-55°C
Startup Charging time	24h
Expected backup time	1.5-6 hours as per load and battery capacity
Features	LED Indicator, Test switch, Battery protection

Connection Schematic



Appendix 1: Article numbering system


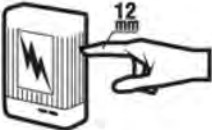
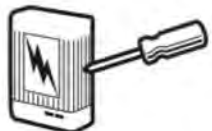



MATRIX-SMD045260 --











Appendix 2: Protection degrees

IP (Ingress Protection) Rating Guide

SOLIDS

1		Protected against a solid object greater than 50mm such as a hand.
2		Protected against a solid object greater than 12.5mm such as a finger.
3		Protected against a solid object greater than 2.5mm such as a screwdriver.
4		Protected against a solid object greater than 1mm such as a wire.
5		Dust Protected. Limited ingress of dust permitted. Will not interfere with operation of the equipment. Two to eight hours.
6		Dust tight. No ingress of dust. Two to eight hours.

WATER

1		Protected against vertically falling drops of water. Limited ingress permitted.
2		Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted.
3		Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted for three minutes.
4		Protected against water splashed from all directions. Limited ingress permitted.
5		Protected against jets of water. Limited ingress permitted.
6		Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
7		Protection against the effects of immersion in water between 15cm and 1m for 30 minutes.
8		Protection against the effects of immersion in water under pressure for long periods.



Rating Example:

IP54

IK



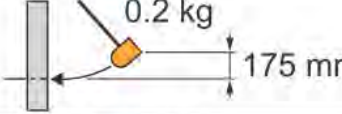
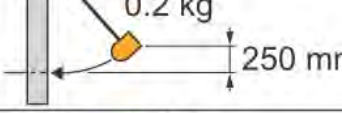
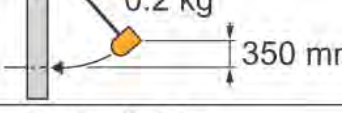
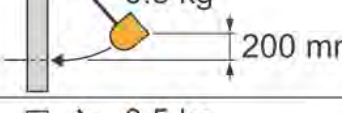
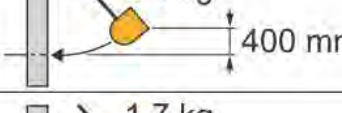
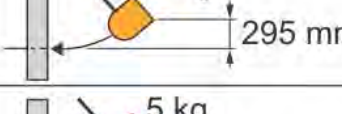


Protection against mechanical impact: protection index - IK

According to standard:

IEC 62262, BS EN 62262 and NF EN 62262

- This table can be used to ascertain the resistance of a product to an impact given in Joules from the IK code (graduated from 00 to 10)

It can also be used to ascertain the correspondence with the old IP code 3rd digit and the corresponding external "Ag" conditions

IK	Tests	Impact energy (in Joules)	"AG" of NF C 15-100
IK 00		0	
IK 01		0.15	
IK 02		0.2	AG1
IK 03		0.35	
IK 04		0.5	
IK 05		0.7	
IK 06		1	
IK 07		2	AG2
IK 08		5	AG3
IK 09		10	
IK 10		20	AG4