

Everlight Light Engine Datasheet

Features

- Light source: High power LED
- NO UV or IR light radiation
- Special batwing and asymmetrical Light patterns
- CRI 70
- Maximum LED power consumption up to 90W
- 4 Channel current input; one channel could hold up to 500mA constant current input.
- Make sure to keep maximum temperature of the aluminum board under 70°C at rated power consumption.

Light Engine Multi-Channel - 90B Series



Typical Applications

- Street Lighting
- Area Lighting
- Parking Lighting
- Residential Street Lighting
- Walkway Lighting
- Public Safety Illumination

Product Picture



Coding of Product Number

SL – Phoenix / 12S4C / 90 / B 4A / F

1 2 3 4 5 6 7

1. **Product Series**

SL: Solid state lighting

2. **Light Engine Type**

Phoenix: Phoenix light pattern

Trex: Trex light pattern

Venus: Venus light pattern

Apollo: Apollo light pattern

Altas: Altas light pattern

SaintLaurent: SaintLaurent light pattern

Mars: Mars light pattern

Zara: Zara light pattern

5. **LED Component Type**

B: B type LED

6. **Internal Code**

7. **Connector Type**

F: Female

M: Male

3. **Electronic Design Definition**

12S4C: 12 series, 4 channel

4. **Maximum LED Power Consumption**

90: 90W

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B6A/F	90W	4500K ~ 5650K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B6A/F				SL-Trex series
SL-Venus/12S4C/90/B6A/F				SL-Venus series
SL-Apollo/12S4C/90/B6A/F				SL-Apollo series
SL-Altas/12S4C/90/B6A/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B6A/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B6A/F				SL-Mars series
SL-Zara/12S4C/90/B6A/F				SL-Zara series
SL-Phoenix/12S4C/90/B6A/M	90W	4500K ~ 5650K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B6A/M				SL-Trex series
SL-Venus/12S4C/90/B6A/M				SL-Venus series
SL-Apollo/12S4C/90/B6A/M				SL-Apollo series
SL-Altas/12S4C/90/B6A/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B6A/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B6A/M				SL-Mars series
SL-Zara/12S4C/90/B6A/M				SL-Zara series

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B4A/F	90W	4500K ~ 5650K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B4A/F				SL-Trex series
SL-Venus/12S4C/90/B4A/F				SL-Venus series
SL-Apollo/12S4C/90/B4A/F				SL-Apollo series
SL-Altas/12S4C/90/B4A/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B4A/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B4A/F				SL-Mars series
SL-Zara/12S4C/90/B4A/F				SL-Zara series
SL-Phoenix/12S4C/90/B4A/M	90W	4500K ~ 5650K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B4A/M				SL-Trex series
SL-Venus/12S4C/90/B4A/M				SL-Venus series
SL-Apollo/12S4C/90/B4A/M				SL-Apollo series
SL-Altas/12S4C/90/B4A/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B4A/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B4A/M				SL-Mars series
SL-Zara/12S4C/90/B4A/M				SL-Zara series

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B5G/F	90W	ANSI 5000K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B5G/F				SL-Trex series
SL-Venus/12S4C/90/B5G/F				SL-Venus series
SL-Apollo/12S4C/90/B5G/F				SL-Apollo series
SL-Altas/12S4C/90/B5G/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B5G/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B5G/F				SL-Mars series
SL-Zara/12S4C/90/B5G/F				SL-Zara series
SL-Phoenix/12S4C/90/B5G/M	90W	ANSI 5000K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B5G/M				SL-Trex series
SL-Venus/12S4C/90/B5G/M				SL-Venus series
SL-Apollo/12S4C/90/B5G/M				SL-Apollo series
SL-Altas/12S4C/90/B5G/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B5G/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B5G/M				SL-Mars series
SL-Zara/12S4C/90/B5G/M				SL-Zara series

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B3G/F	90W	ANSI 5000K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B3G/F				SL-Trex series
SL-Venus/12S4C/90/B3G/F				SL-Venus series
SL-Apollo/12S4C/90/B3G/F				SL-Apollo series
SL-Altas/12S4C/90/B3G/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B3G/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B3G/F				SL-Mars series
SL-Zara/12S4C/90/B3G/F				SL-Zara series
SL-Phoenix/12S4C/90/B3G/M	90W	ANSI 5000K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B3G/M				SL-Trex series
SL-Venus/12S4C/90/B3G/M				SL-Venus series
SL-Apollo/12S4C/90/B3G/M				SL-Apollo series
SL-Altas/12S4C/90/B3G/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B3G/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B3G/M				SL-Mars series
SL-Zara/12S4C/90/B3G/M				SL-Zara series

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B3T/F	90W	ANSI 4000K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B3T/F				SL-Trex series
SL-Venus/12S4C/90/B3T/F				SL-Venus series
SL-Apollo/12S4C/90/B3T/F				SL-Apollo series
SL-Altas/12S4C/90/B3T/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B3T/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B3T/F				SL-Mars series
SL-Zara/12S4C/90/B3T/F				SL-Zara series
SL-Phoenix/12S4C/90/B3T/M	90W	ANSI 4000K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B3T/M				SL-Trex series
SL-Venus/12S4C/90/B3T/M				SL-Venus series
SL-Apollo/12S4C/90/B3T/M				SL-Apollo series
SL-Altas/12S4C/90/B3T/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B3T/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B3T/M				SL-Mars series
SL-Zara/12S4C/90/B3T/M				SL-Zara series

Product Family

Order Code	LED Power Consumption	Beam Color	Connector Type	Light Engine Type
SL-Phoenix/12S4C/90/B2S/F	90W	ANSI 3000K	Female	SL-Phoenix series
SL-Trex/12S4C/90/B2S/F				SL-Trex series
SL-Venus/12S4C/90/B2S/F				SL-Venus series
SL-Apollo/12S4C/90/B2S/F				SL-Apollo series
SL-Altas/12S4C/90/B2S/F				SL-Altas series
SL-SaintLaurent/12S4C/90/B2S/F				SL-SaintLaurent series
SL-Mars/12S4C/90/B2S/F				SL-Mars series
SL-Zara/12S4C/90/B2S/F				SL-Zara series
SL-Phoenix/12S4C/90/B2S/M	90W	ANSI 3000K	Male	SL-Phoenix series
SL-Trex/12S4C/90/B2S/M				SL-Trex series
SL-Venus/12S4C/90/B2S/M				SL-Venus series
SL-Apollo/12S4C/90/B2S/M				SL-Apollo series
SL-Altas/12S4C/90/B2S/M				SL-Altas series
SL-SaintLaurent/12S4C/90/B2S/M				SL-SaintLaurent series
SL-Mars/12S4C/90/B2S/M				SL-Mars series
SL-Zara/12S4C/90/B2S/M				SL-Zara series

Product Specification

Parameter	Description
Light Source¹	48 pieces High Brightness LED, 12 Series and 4 Channel
Optical Lens²	PMMA Optical Lens
Optical Design	Special Batwing and Asymmetrical Light Pattern
Beam Color Option	White (4500~5650K)
	White (ANSI 5000K)
	Neutral White (ANSI 4000K)
	Warm White (ANSI 3000K)
MCPCB	High Thermal Conductivity MCPCB
Power Input Design³ (Max.)	The 4-channel must be driven by constant current ; Each channel must under 500 mA constant current input ; The voltage range: 34~44 V
Waterproof Connector	Standard M12 connector

Note:

1. Do not take apart the light engine; otherwise, the light engine will be damaged and might cause artificial destruction.
2. PMMA optical Lens can not be cleaned by organic or acidic solvent. Lens damage caused by organic or acidic solvent may lead to decrease of light output. Be sure to keep the PMMA under 70℃ operating temperature
3. The power supply unit for the LED light engine should be certificated by safety certification organizations such as UL, FCC, CE, etc. Everlight will not be responsible for any damage caused by careless use.

Optical Characteristics ($T_{Ambient}=25^{\circ}C$)

Beam Color	Product Family	Light Output @ $T_{board}=25^{\circ}C$ (initial) ¹	Light Output @ $T_{board}=50^{\circ}C$ ²	Unit
White (4500~5650K)	SL-Phoenix/12S4C/90/B6A/F	Minimum 8400	Minimum 7650	lm
	SL-Trex/12S4C/90/B6A/F			
	SL-Venus/12S4C/90/B6A/F			
	SL-Apollo/12S4C/90/B6A/F			
	SL-Altas/12S4C/90/B6A/F			
	SL-SaintLaurent/12S4C/90/B6A/F			
	SL-Mars/12S4C/90/B6A/F			
	SL-Zara/12S4C/90/B6A/F			
	SL-Phoenix/12S4C/90/B6A/M			
	SL-Trex/12S4C/90/B6A/M			
	SL-Venus/12S4C/90/B6A/M			
	SL-Apollo/12S4C/90/B6A/M			
	SL-Altas/12S4C/90/B6A/M			
	SL-SaintLaurent/12S4C/90/B6A/M			
	SL-Mars/12S4C/90/B6A/M			
	SL-Zara/12S4C/90/B6A/M			
	SL-Phoenix/12S4C/90/B4A/F	Minimum 6950	Minimum 6300	lm
	SL-Trex/12S4C/90/B4A/F			
	SL-Venus/12S4C/90/B4A/F			
	SL-Apollo/12S4C/90/B4A/F			
	SL-Altas/12S4C/90/B4A/F			
	SL-SaintLaurent/12S4C/90/B4A/F			
	SL-Mars/12S4C/90/B4A/F			
	SL-Zara/12S4C/90/B4A/F			
	SL-Phoenix/12S4C/90/B4A/M			
	SL-Trex/12S4C/90/B4A/M			
	SL-Venus/12S4C/90/B4A/M			
	SL-Apollo/12S4C/90/B4A/M			
	SL-Altas/12S4C/90/B4A/M			
	SL-SaintLaurent/12S4C/90/B4A/M			
	SL-Mars/12S4C/90/B4A/M			
	SL-Zara/12S4C/90/B4A/M			

Note:

- As temperature increases, life-time and light output may gradually reduce. Please use good thermal management.
- Luminaire light output is measured at $T_a=50^{\circ}C$ by maintaining a tolerance of $\pm 10\%$ on flux and power measurements.

Optical Characteristics ($T_{Ambient}=25^{\circ}C$)

Beam Color	Product Family	Light Output @ $T_{board}=25^{\circ}C$ (initial) ¹	Light Output @ $T_{board}=50^{\circ}C$ ²	Unit
White (ANSI 5000K)	SL-Phoenix/12S4C/90/B5G/F	Minimum 7500	Minimum 6800	lm
	SL-Trex/12S4C/90/B5G/F			
	SL-Venus/12S4C/90/B5G/F			
	SL-Apollo/12S4C/90/B5G/F			
	SL-Altas/12S4C/90/B5G/F			
	SL-SaintLaurent/12S4C/90/B5G/F			
	SL-Mars/12S4C/90/B5G/F			
	SL-Zara/12S4C/90/B5G/F			
	SL-Phoenix/12S4C/90/B5G/M			
	SL-Trex/12S4C/90/B5G/M			
	SL-Venus/12S4C/90/B5G/M			
	SL-Apollo/12S4C/90/B5G/M			
	SL-Altas/12S4C/90/B5G/M			
	SL-SaintLaurent/12S4C/90/B5G/M			
	SL-Mars/12S4C/90/B5G/M			
	SL-Zara/12S4C/90/B5G/M			
	SL-Phoenix/12S4C/90/B3G/F	Minimum 5950	Minimum 5400	lm
	SL-Trex/12S4C/90/B3G/F			
	SL-Venus/12S4C/90/B3G/F			
	SL-Apollo/12S4C/90/B3G/F			
	SL-Altas/12S4C/90/B3G/F			
	SL-SaintLaurent/12S4C/90/B3G/F			
	SL-Mars/12S4C/90/B3G/F			
	SL-Zara/12S4C/90/B3G/F			
	SL-Phoenix/12S4C/90/B3G/M			
	SL-Trex/12S4C/90/B3G/M			
	SL-Venus/12S4C/90/B3G/M			
	SL-Apollo/12S4C/90/B3G/M			
	SL-Altas/12S4C/90/B3G/M			
	SL-SaintLaurent/12S4C/90/B3G/M			
	SL-Mars/12S4C/90/B3G/M			
	SL-Zara/12S4C/90/B3G/M			

Note:

1. As temperature increases, life-time and light output may gradually reduce. Please use good thermal management.
2. Luminaire light output is measured at $T_a=50^{\circ}C$ by maintaining a tolerance of $\pm 10\%$ on flux and power measurements.

Optical Characteristics ($T_{Ambient}=25^{\circ}C$)

Beam Color	Product Family	Light Output @ $T_{board}=25^{\circ}C$ (initial) ¹	Light Output @ $T_{board}=50^{\circ}C$ ²	Unit
White (ANSI 4000K)	SL-Phoenix/12S4C/90/B3T/F	Minimum 5950	Minimum 5400	lm
	SL-Trex/12S4C/90/B3T/F			
	SL-Venus/12S4C/90/B3T/F			
	SL-Apollo/12S4C/90/B3T/F			
	SL-Altas/12S4C/90/B3T/F			
	SL-SaintLaurent/12S4C/90/B3T/F			
	SL-Mars/12S4C/90/B3T/F			
	SL-Zara/12S4C/90/B3T/F			
	SL-Phoenix/12S4C/90/B3T/M			
	SL-Trex/12S4C/90/B3T/M			
	SL-Venus/12S4C/90/B3T/M			
	SL-Apollo/12S4C/90/B3T/M			
	SL-Altas/12S4C/90/B3T/M			
	SL-SaintLaurent/12S4C/90/B3T/M			
	SL-Mars /12S4C/90/B3T/M			
	SL-Zara/12S4C/90/B3T/M			
White (ANSI 3000K)	SL-Phoenix/12S4C/90/B2S/F	Minimum 4950	Minimum 4500	lm
	SL-Trex/12S4C/90/B2S/F			
	SL-Venus/12S4C/90/B2S/F			
	SL-Apollo/12S4C/90/B2S/F			
	SL-Altas/12S4C/90/B2S/F			
	SL-SaintLaurent/12S4C/90/B2S/F			
	SL-Mars/12S4C/90/B2S/F			
	SL-Zara/12S4C/90/B2S/F			
	SL-Phoenix/12S4C/90/B2S/M			
	SL-Trex/12S4C/90/B2S/M			
	SL-Venus/12S4C/90/B2S/M			
	SL-Apollo/12S4C/90/B2S/M			
	SL-Altas/12S4C/90/B2S/M			
	SL-SaintLaurent/12S4C/90/B2S/M			
	SL-Mars/12S4C/90/B2S/M			
	SL-Zara/12S4C/90/B2S/M			

Note:

- As temperature increases, life-time and light output may gradually reduce. Please use good thermal management.
- Luminaire light output is measured at $T_a=50^{\circ}C$ by maintaining a tolerance of $\pm 10\%$ on flux and power measurements.

Electro-Optical-Thermal Characteristics ($T_{Ambient}=25^{\circ}C$)

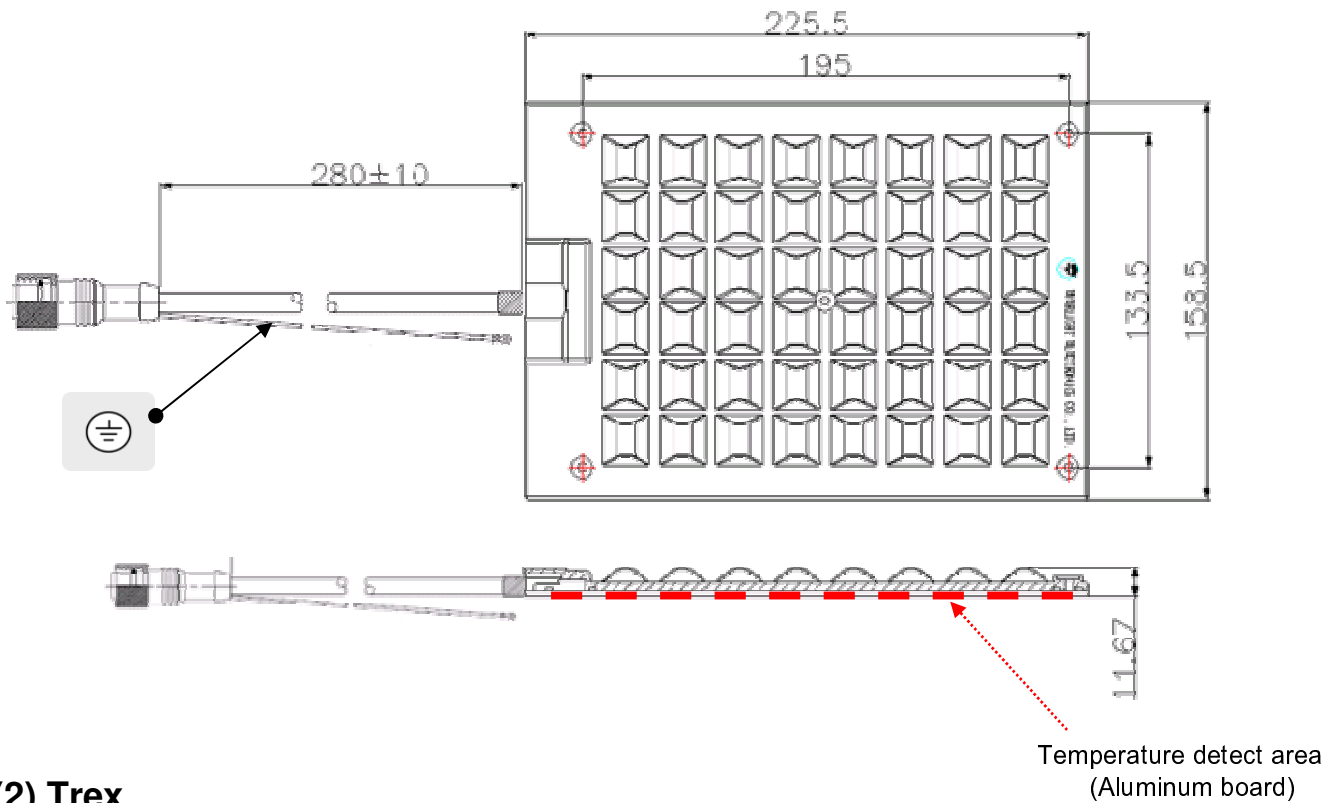
Parameter	Symbol	Parameter	Unit
Maximum Power Consumption	P_d	90	Watt
Input Current for Each Channel	I_f	500	mA
Input Voltage Range for Each Channel ³	V_f	34~44	Voltage
Operating Temperature	T_a	-30~+50	$^{\circ}C$
Temperature of the Aluminum Board (Max.) ⁴	T_b	+70	$^{\circ}C$
Storage Temperature	T_{stg}	-30~+60	$^{\circ}C$

Note:

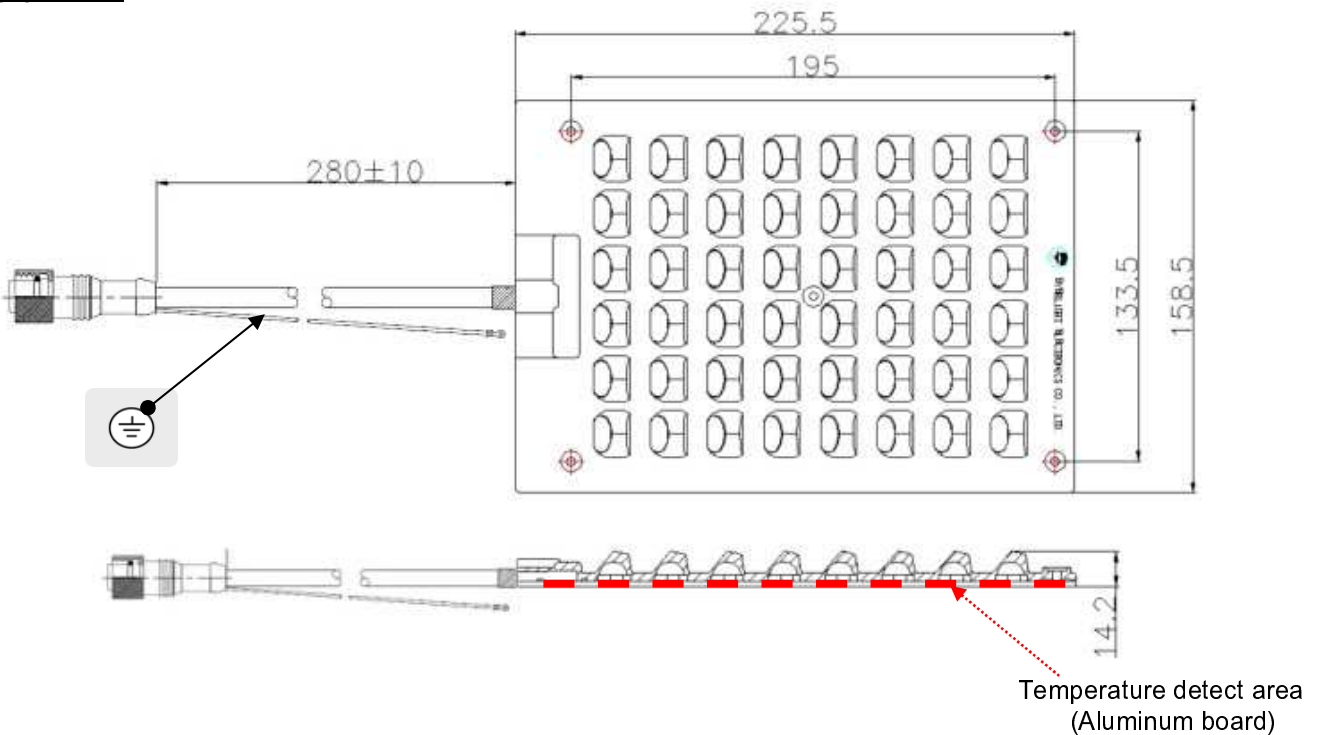
1. Input voltage range for each channel is for reference only. All channels must be driven by constant current.
2. Light engine could be damaged if the temperature of aluminum board rises over the specified limit. Everlight will not be responsible for the use of improper or unqualified power supply. Everlight will also not be responsible for improper installation and misuse of the product.

Product Dimensions

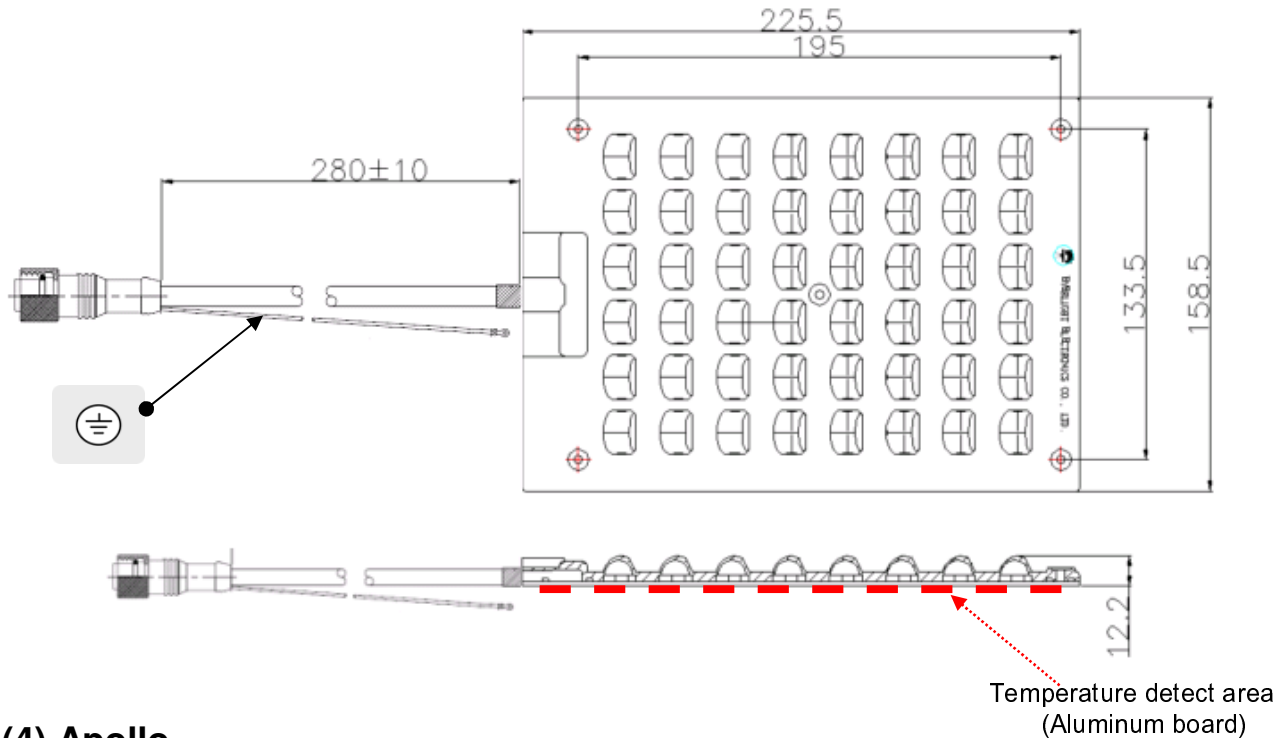
(1) Phoenix



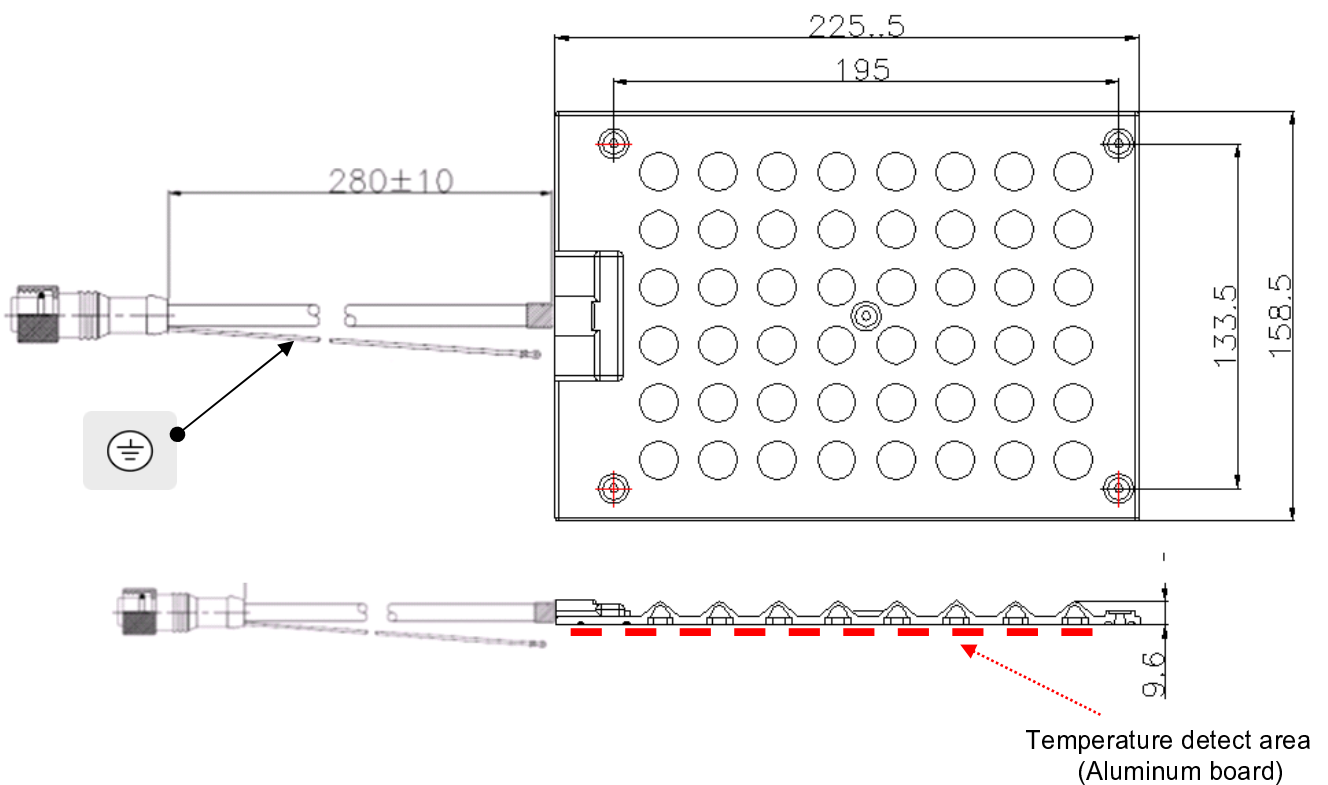
(2) Trex



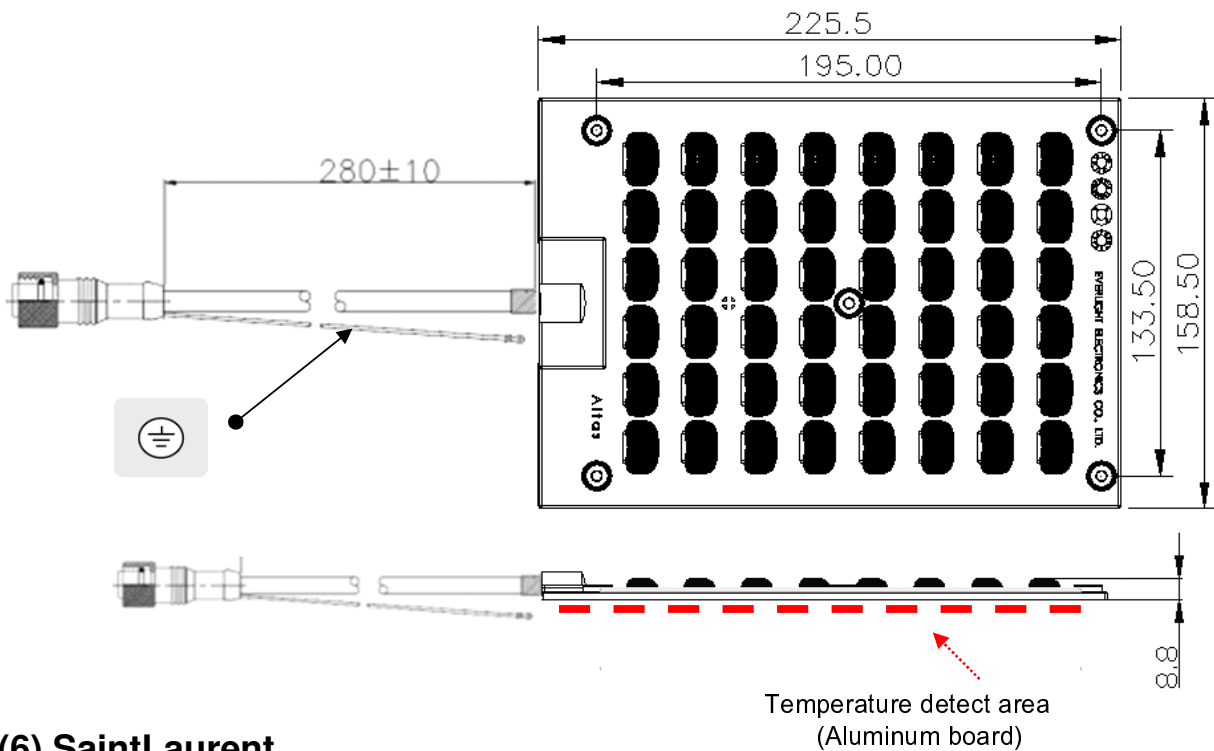
(3) Venus



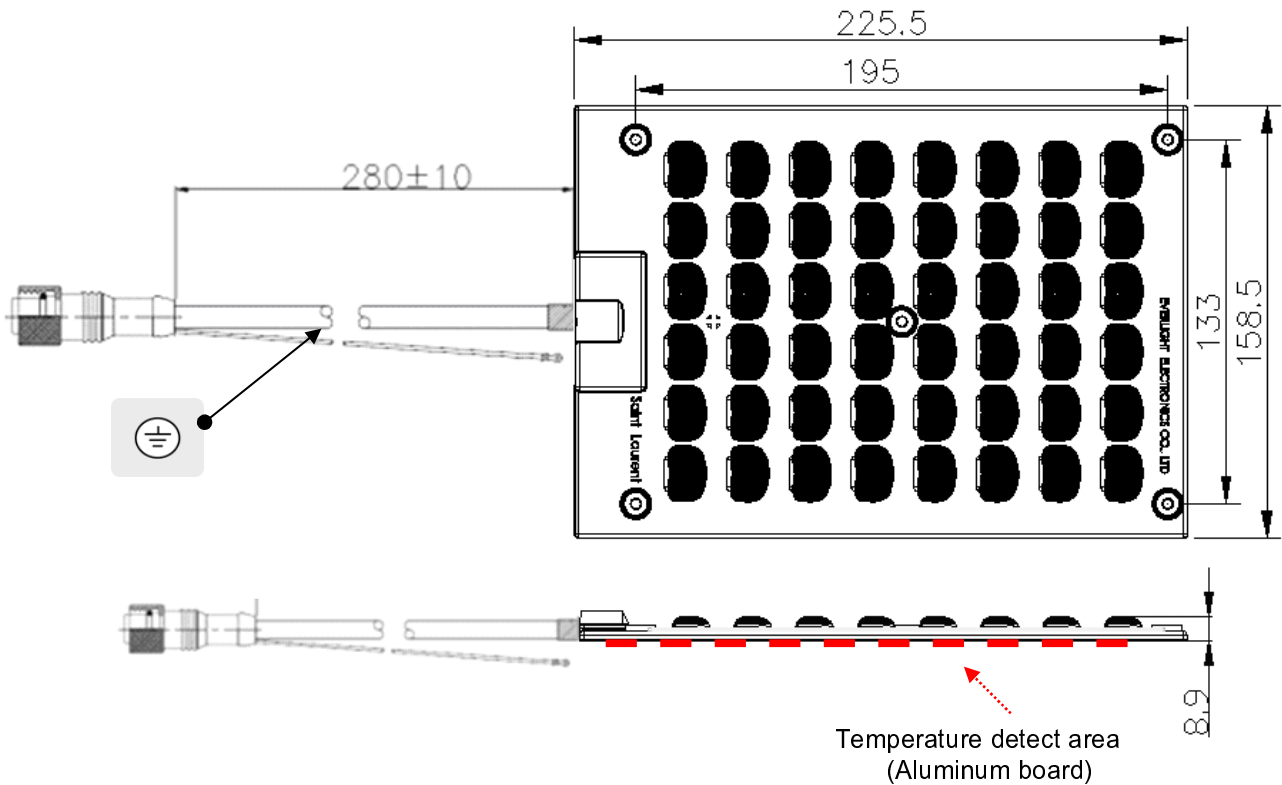
(4) Apollo



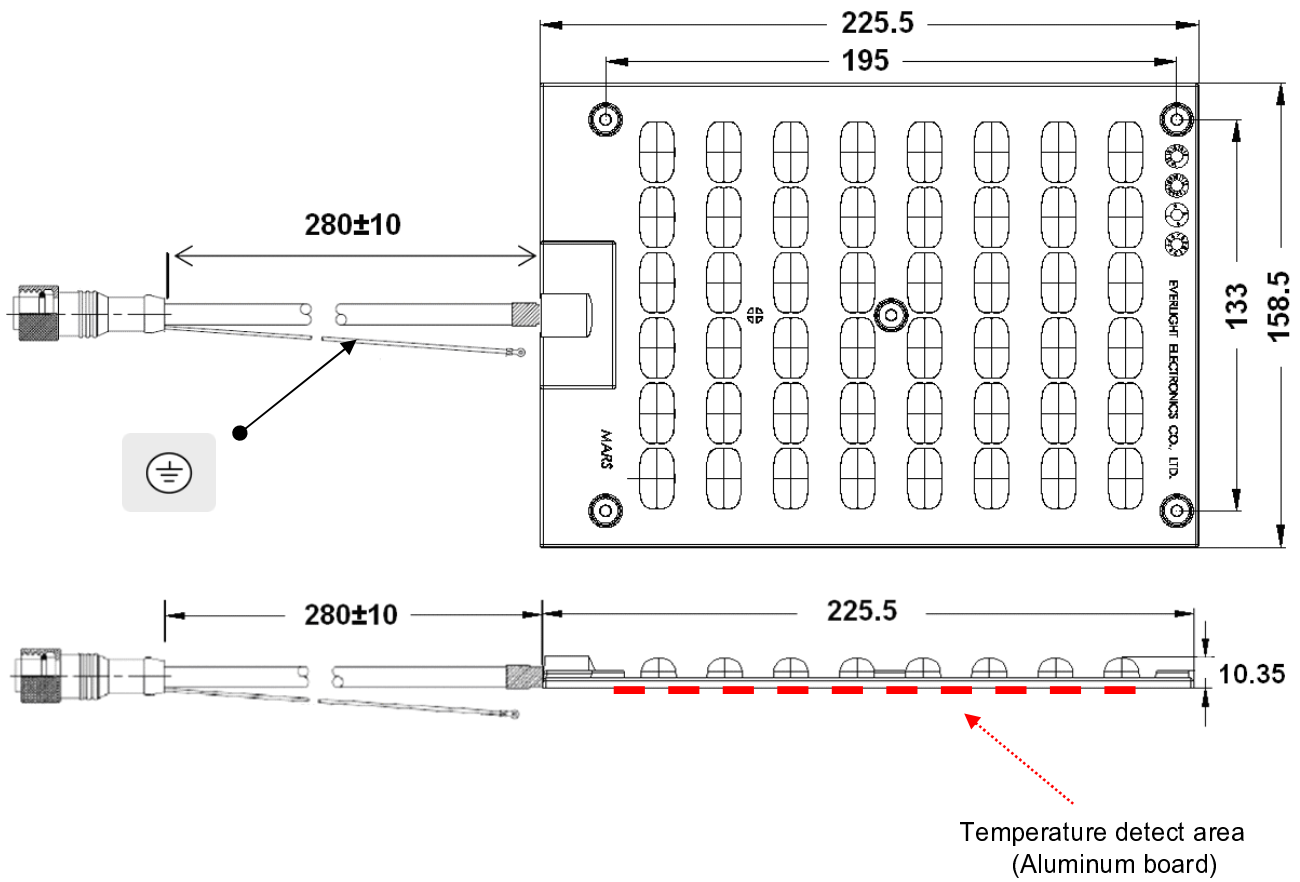
(5) Altas



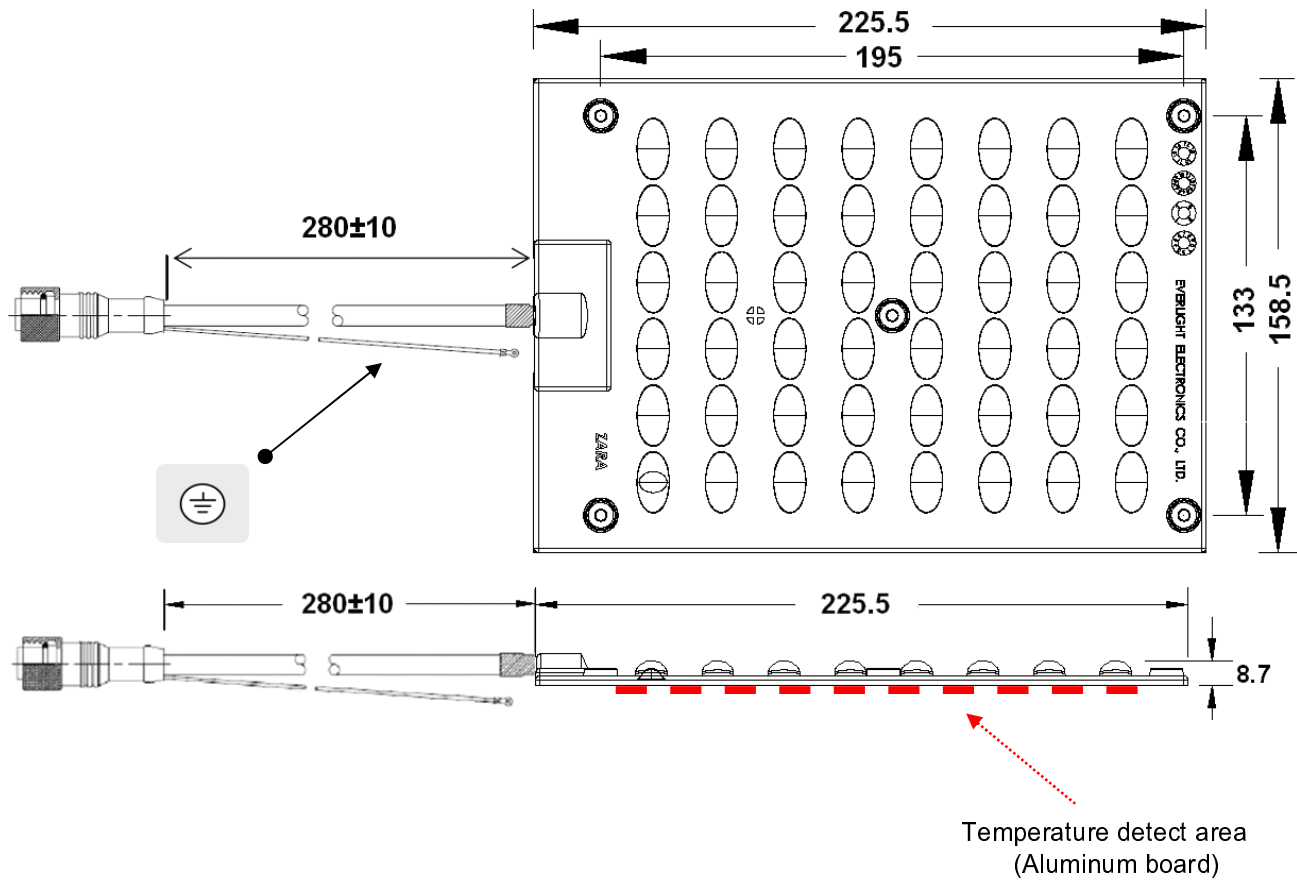
(6) SaintLaurent



(7) Mars



(8) Zara

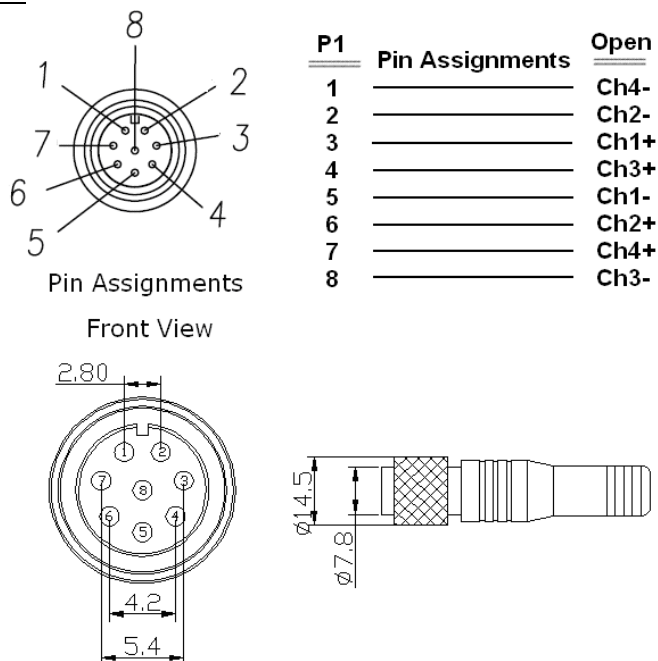


Notes:

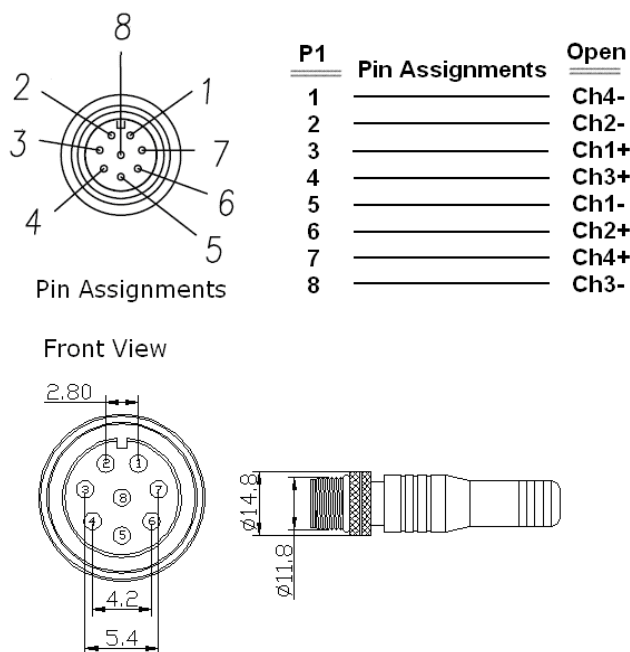
1. Dimensions are in millimeter (mm).
2. Tolerances unless otherwise mentioned is ± 1 mm.
3. The screw is M3 type with washer. We strongly suggest use stainless steel material.
4. The torsion should be less than 4.8 (kg x cm) .
5. Do not handle the lighting engine by grasping the connector wire; otherwise, the connector wire could break. The tensile force of connector & board should be less than 5 kg

Waterproof Connector Types

Female Connector



Male Connector



Notes:

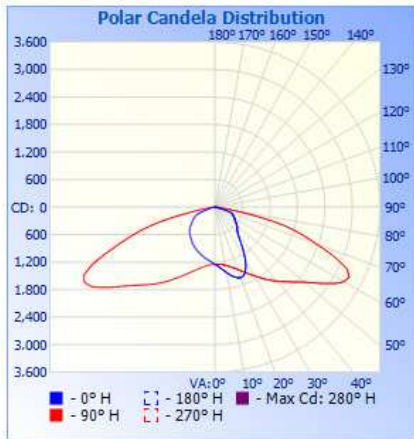
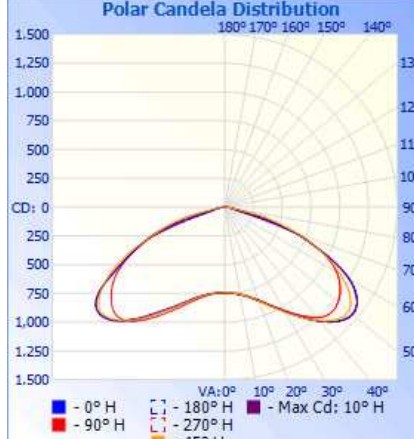
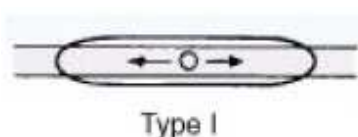
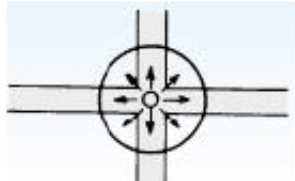
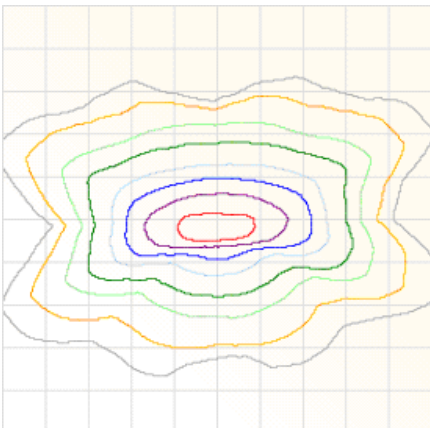
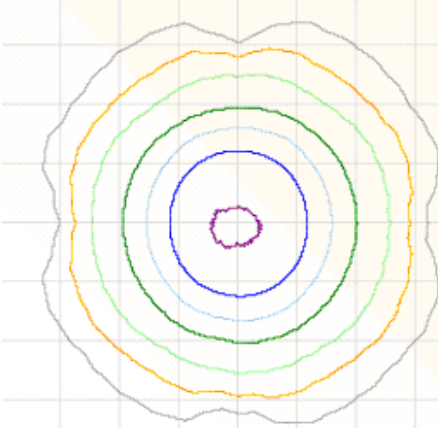
1. Please read the coding of part number and check the connector type before placing an order.
2. Tolerances unless otherwise mentioned is $\pm 0.25\text{mm}$.

Everlight Light Engine Illumination Characteristics

Standard Intensity Distribution Curves		
Light Engine Type	SL-Phoenix Series	SL- Trex Series
Intensity Distribution Curve		
Application	Type II Asymmetric wide for parking and road way applications.	Type II Asymmetric short for parking and road way applications
Light Pattern		

Notes:

1. The iso lux plot is a reference for the light pattern only.
2. To get more information about lux for different mounting height, please refer to "Installation Instruction".

Standard Intensity Distribution Curves		
Light Engine Type	SL-Venus Series	SL-Apollo Series
Intensity Distribution Curve		
Application	 Type I Symmetric wide for parking and road way applications	 Type V Tunnel and Floodlight. Use generally for transition and interior zones for tunnels, and parking lots.
Light Pattern		

Notes:

1. The iso lux plot is a reference for the light pattern only.
2. To get more information about lux for different mounting height, please refer to "Installation Instruction".

Standard Intensity Distribution Curves		
Light Engine Type	SL-Atlas Series	SL- SaintLaurent Series
Intensity Distribution Curve		
Application	Type II Asymmetric wide for parking and road way applications.	Type III Asymmetric wide for parking and road way applications
Light Pattern		

Notes:

1. The iso lux plot is a reference for the light pattern only.
2. To get more information about lux for different mounting height, please refer to "Installation Instruction".

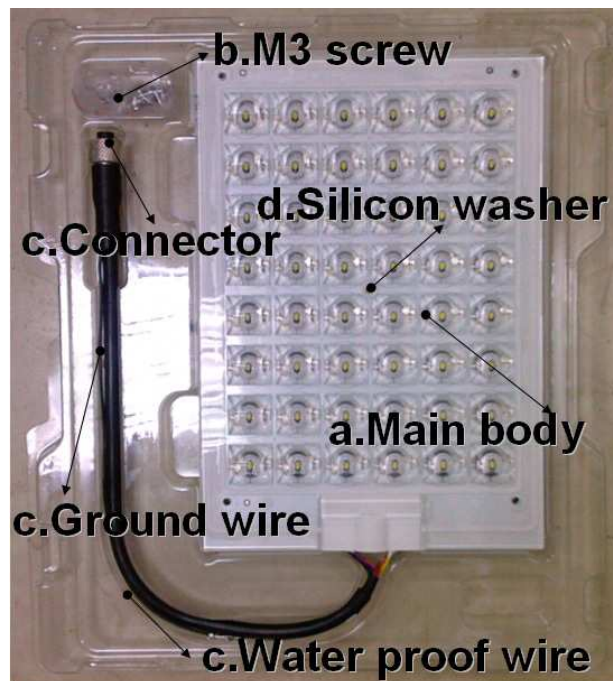
Standard Intensity Distribution Curves		
Light Engine Type	SL-Mars Series	SL- Zara Series
Intensity Distribution Curve		
Application	Type I Symmetric short for parking and road way applications	Type I Symmetric wide for parking and road way applications
Light Pattern		

Notes:

1. The iso lux plot is a reference for the light pattern only.
2. To get more information about lux for different mounting height, please refer to "Installation Instruction".

Carrier Specifications

- One carton contains 12 pieces of light engines
- Carton size: 315(L) x 295(W) x 245(H) mm
- Overall weight: ~8Kg / ~18lbs (with packaging)



Outside Carton Label Explanation

- CPN: Customer's Production Number
- P/N : Production Number
- QTY: Packing Quantity
- CAT: Ranks
- HUE: Color bin
- REF: Reference
- LOT No: Lot Number
- MADE IN TAIWAN: Production Place

