Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

LED Module
Modular Platform Engine Series

E-Type Gen2

SL-PGR2V47MBWW
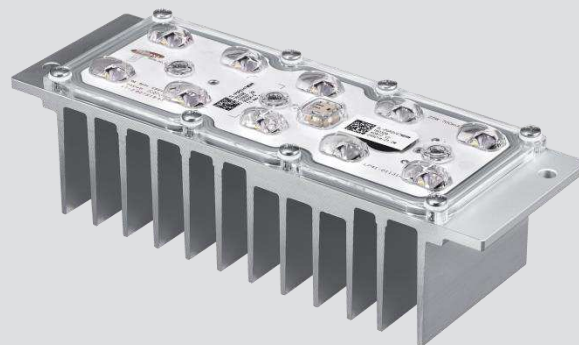
Samsung outdoor modules enable flexible modular design,
providing better solution for outdoor application

Features & Benefits

- High lumen density of 2400 lm
- Seamless combination by modular design
- Lens-type module, that makes fixtures easily designed
- IP66 for durability and robustness

Applications

Outdoor Lighting:

- Roadway
- Street Light
- Parking Lot
- Tunnel Light

SAMSUNG

Table of Contents

1. Product Code Information

Light Distribution (Optical Lens Type)	Nominal CCT (K)	Product Code	Remark
IESNA Type II Short	5000	SL-PGR2V47MBWW	
IESNA Type I Short	5000	SL-PGR2V43LBWW	
IESNA Type II Very Short	5000	SL-PGR2V43MBWW	
Other Available Types:			
IESNA Type I Medium (I)	4000	SL-P7T2V41MBWW	
	5000	SL-P7R2V41MBWW	
IESNA Type II Medium (I)	4000	SL-P7T2V42MBWW	
	5000	SL-P7R2V42MBWW	
IESNA Type II Medium (L)	4000	SL-P7T2V47MBWW	
	5000	SL-P7R2V47MBWW	
IESNA Type II Short (I)	4000	SL-P7T2V42SBWW	
	5000	SL-P7R2V42SBWW	
IESNA Type III Medium (I)	4000	SL-P7T2V43MBWW	
	5000	SL-P7R2V43MBWW	
IESNA Type III Long	4000	SL-P7T2V43LBWW	
	5000	SL-P7R2V43LBWW	
IESNA Type IV Medium (I)	4000	SL-P7T2V44MBWW	
	5000	SL-P7R2V44,BWW	
IESNA Type V Short (I)	4000	SL-P7T2V45SBWW	
	5000	SL-P7R2V45SBWW	
Beam Angle 85°	4000	SL-P7T2V485BWW	
	5000	SL-P7R2V485BWW	

Notes:

1) Luminous flux of IESNA Type IV Medium (I) type is lower than other types

2. Characteristics

a) Maximum Rating

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L80B50 @ $t_{p,\,50}$ = 105 ºC
Ingress Protection (IP)	IP66	-	For Damp Location (UL marking)
Operating Temperature (T_c)	10 ~ 92	ºC	
Storage Temperature (T_a)	-30 ~ +70	ºC	
ESD	±8 kV (contact) / ±15 kV (air)	kV	
Working Voltage for Insulation	50	V	

※ Ta : Ambient Temperature

b) Electro-optical Characteristics   (I_F = 700 mA, t_p = 58 °C)

Item	Unit	Nom. CCT (K)	Min.	Typ.	Max.	Remark
Luminous Flux (Φ_v)	lm	5000	1950	2400	-	
Luminous Efficacy	lm/W	5000	-	115	-	
CCT	K	5000	4745	5000	5311	
Color Rendering Index (Ra)		-	75			
Operating Current (I_F)	mA		-	700	1000	per module
Operating Voltage (V_F)	Vdc		26	30.0	33.0	
Power Consumption (P)	W		-	21	25	@ 30 V, 700mA in a module

Notes:

1) T_C: Case temperature, measured at "**Tc point**" and at the rated typical DC current

2) Samsung maintains measurement tolerance of

   : luminous flux = ±7 %, CRI = ±1, voltage = ±5%, CCT = ±5%, Current = ±5%

3) The maximum operating current means the highest limit in any operating condition

4) Voltage difference between modules is tightly controlled to be less than 1.0 V so that the maximum current of any module can be limited close to the value stated on above table (voltage bin of the module is printed at the labels on each module and on outer box)

5) The power consumption for a specific module is dependent on the operating voltage distribution across the modules in parallel connection

3. Structure & Assembly

a) Appearance


[SL-PGR2V47MBWW]
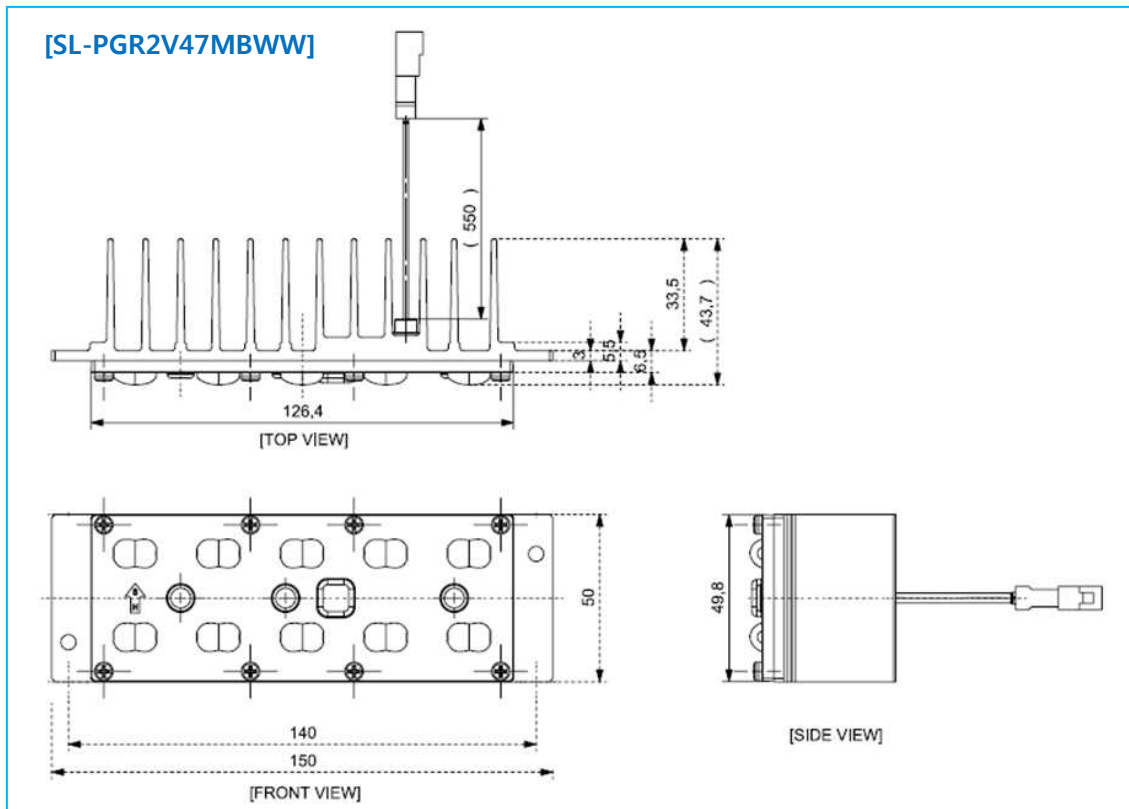
Note:

The appearance will be different for various optical solutions depending on the combination of the available core lenses.

Critical dimensions are the same for all optical solutions, except for thickness difference at the core lens cross-section.

b) Dimension

Model	Dimension	Specification	Tolerance	Unit	Remark
SL-PGR2V47MBWW	Module Length	150	±0.5	mm	IESNA Type II Short
	Module Width	50	±0.5	mm	
	Module Height	43.7	±0.5	mm	
	PCB Thickness	1.2	±0.12	mm	
	Module Weight	295	±20	g	

c) Structure

[SL-PGR2V47MBWW]
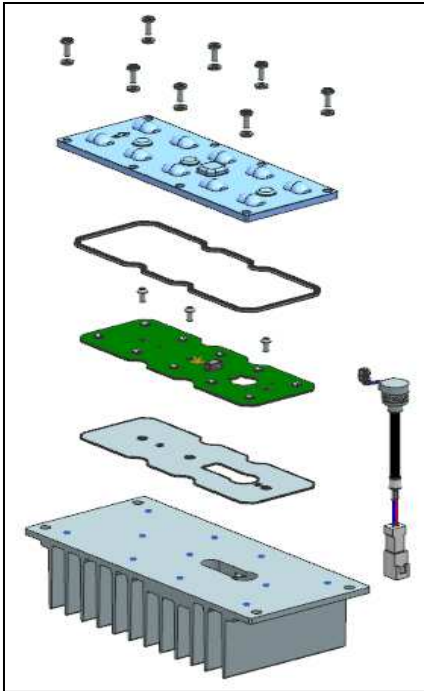
| No.	Parts	Specifications
1.	Lens cover screws (8 pcs)	Material: Stainless steel with teflon washer Location: Between array lens cover and base plate heat sink
.	Array lens cover	Lens type : IESNA Type II Short Material: Polycarbonate Thickness: 2.0 mm UL-94 Flammability: V-2
3.	Rubber seal	Material: Molded silicone
4.	LED board	LED: LH351B Ceramic high flux rank (10 pcs) Material: MC-PCB, aluminum Thickness: 1.2 mm Screws: Stainless steel (3 pcs)
5.	Side inlet harness	Material: Molded PVC coated with silicone sealant, 105 °C rating Wires: 24 AWG, 105 °C rating, with end connector Length (wires): 550 mm
6.	Thermal pad	Between PCB and base plate heat sink
7.	Base plate heat sink	Material: Extrusion aluminum

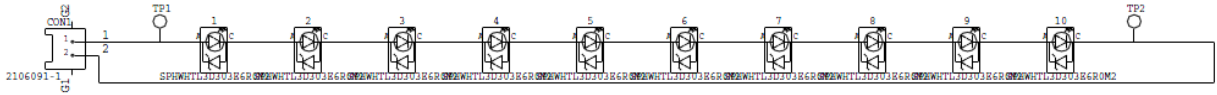## d) Light Distribution

IESNA Type II Short Lens Type
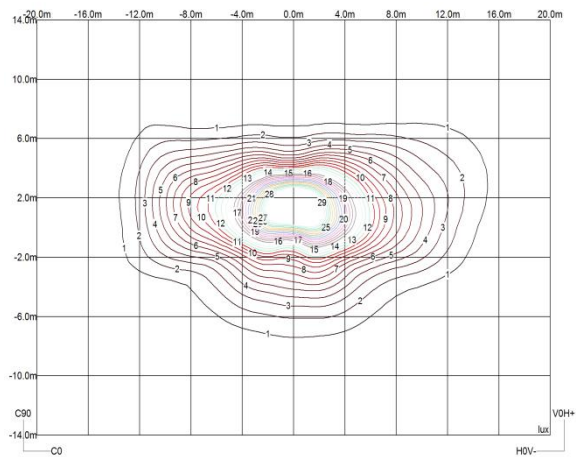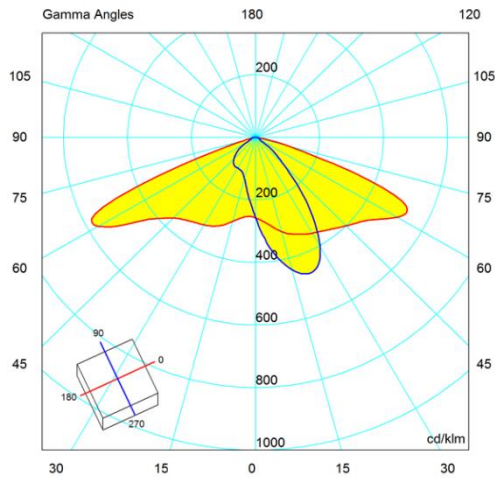
e) Thermal Management

Performance temperatures are measured on "**Tc point**" as indicated below (located at long side-center of the Module):

Tc Point

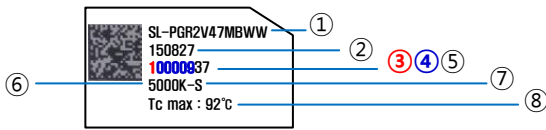※Tc : case temperature
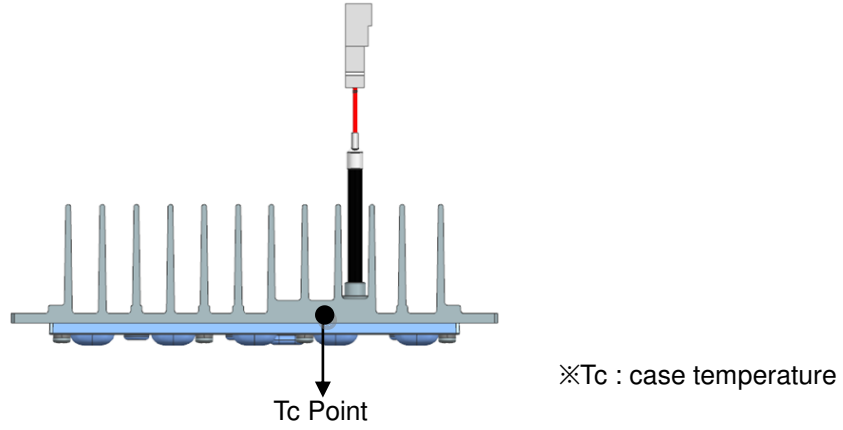
g) Schematic Circuit

4. Certification & Declaration

Item	Compliant to	Remark
Declaration	RoHS	Hazardous Substance & Material

5. Label Structure

a) LED Board Label

Number	Item	Description
①	Model Number (Product Code)	Refer to page 3
②	SMT Date Code	-
③	SMT Line	-
④	Serial Number	00001 ~ 99999
⑤	LED Binning Code	-
⑥	CCT	5000 K
⑦	LED Maker	S : Samsung
⑧	Tc max	92℃

b) Module Label
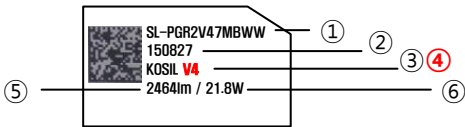
Number	Item	Description
①	Model Number (Product Code)	Refer to page 3
②	Production Date Code	-
③	Manufacturing Location	KO (Country / Korea) + SIL (Factory)
④	Vf Binning Code	-
⑤	Luminous Flux	-
⑥	Operating Wattage	-

c) Outer Box Label

| Number	Item	Description
①	Model Number (Product Code)	Refer to page 3
②	Lot No.	Factory Code (2) + Production Date (4) + Serial No. (4)
③	Country of Origin	KOREA
④	Packing Quantity	12 pc
⑤	Production Date (year/week)	yyww
⑥	Label Printing Date (year/month/date)	yy/mm/dd

6. Packing Structure

Packing Process

Step 1: 6 Modules of the same voltage bin are placed inside one inner box:

Step 2: Two stacks of inner boxes (totaling 12 Modules, all having same voltage bin) are placed inside one outer box:

Step 3: 32 boxes (384 modules) are placed on one pallet:
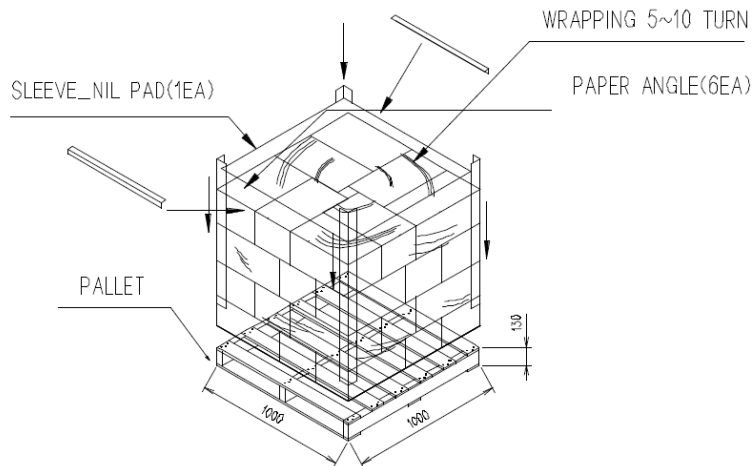
Packing	Quantity (modules)	Dimension (mm)			
		Length	Width	Height	Tolerance
Inner Box	6	400	227	83	±3
Outer Box	12 (2 inner boxes)	419	240	171	±5
Pallet	384 (32 outer boxes)	1000	1000	130	±10

7. Precautions in Handling & Use

7.1. The LED Lighting Modules for white light are devices which are materialized by combining white LEDs. The color of white light can differ a little unusually to diffuser plate (sign-board panel). Also when the LEDs are illuminating, operating current should be decided after considering the ambient maximum temperature.

7.2. Handling

To prevent the LED Lighting Modules from making any defectives, please handle the LED Lighting modules with care as follows.

(1) Don't drop the unit and don't give the unit any shocks.

(2) Don't bend the PCB and don't touch the LED Resin.

(3) Don't storage the Module in a dusty place or room.

(4) Don't take the product apart.

(5) Don't touch the LED and also PCB and other circuit parts of Module with your naked fingers or sharpness things.

(6) Take care so that do not pull wire with hand in case of carries or moves LED Lighting Modules.

(7) *VOCs can be generated from adhesives, flux, hardener or organic additives used in luminaires. This phenomenon can cause a significant loss of light emitted from the luminaires. In order to prevent these problems, we recommend users to know the physical properties of the materials used in luminaires, and they must be selected carefully.

(*VOCs: Volatile Organic Compounds)

7.3. Cleaning

The LED Lighting Modules should not be used in any type of fluid such as water, oil, organic solvent, etc.

It is recommended that IPA (Isopropyl Alcohol) be used as a solvent for cleaning the LED Lighting Modules.

When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not.

Freon solvents should not be used to clean the LEDs because of worldwide regulations. Do not clean the LED Lighting Modules by the ultrasonic. Before cleaning, a pre-test should be done to confirm whether any damage to the LED Lighting modules will occur.

7.4. Static Electricity

Static electricity or surge voltage damages the LED Lighting Modules. Please keep the working process anti-static electricity condition to prevent the Lighting from destroying, as following.

(1) Anyone who handles the unit should be well grounded.(earth ring or anti-static glove)

(2) Anyone who handles the unit should wear anti-electrostatic working clothes.

(3) All kinds of device and instruments, such as working table, measuring instruments and assembly jigs in your production lines should be well grounded.

7.5. Storage

The LED Lighting Modules must be stored to insert a package of a moisture absorbent material(silica gel) in a box.

7.6. Others

If over voltage which exceeds the absolute maximum rating is applied to LED Lighting Modules.

It will cause damage Circuits(that LED is included) and result in destruction.

Do not directly look into lighted LED with naked eyes.

Please use this product within 5 months, which is kept in its original packaging unopened when stocked.

Legal and additional information.

www.samsungled.com

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