



## UVR280-SC12P

- Deep Ultraviolet Light Emission Source
- 280 nm, 3 mW
- All Metal Design
- Beam Angle 120 deg.



### Description

**UVR280-SC12P** is an AlGaIn based single emitter **DEEP-UV LED** with a typical peak wavelength of **280 nm** and an optical output power of **3 mW** at a current of **50 mA**. **UVR280-SC12P** comes in an all metal 4545 SMD package, soldered onto a hexagonal aluminium **STAR-PCB** with low thermal resistance.

### Maximum Rating (T<sub>CASE</sub> = 25°C)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation, DC	P <sub>D</sub>		500	mW
Forward Current*	I <sub>F</sub>		50	mA
Thermal Resistance (junction-case)	R <sub>thv</sub>		15	°C/W
Operating Temperature*	T <sub>OPR</sub>	- 40	+ 60	°C
Storage Temperature	T <sub>STG</sub>	- 40	+ 100	°C
Soldering Temperature (max. 5s)	T <sub>SOL</sub>		260	°C

\* Operation close to the absolute maximum ratings may affect device reliability



### Electro-Optical Characteristics (T<sub>CASE</sub> = 25°C, I<sub>F</sub> = 50 mA)

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Peak Wavelength*	λ <sub>P</sub>	275		285	nm
<b>Radiated Power**</b>	<b>P<sub>O</sub></b>	<b>2</b>	<b>3</b>		<b>mW</b>
Spectral Width (FWHM)	Δλ		15		nm
Forward Voltage	V <sub>F</sub>		8		V
<b>Viewing Angle</b>	<b>2θ<sub>1/2</sub></b>		<b>120</b>		<b>deg.</b>

\*Peak Wavelength measurement tolerance is ±3nm

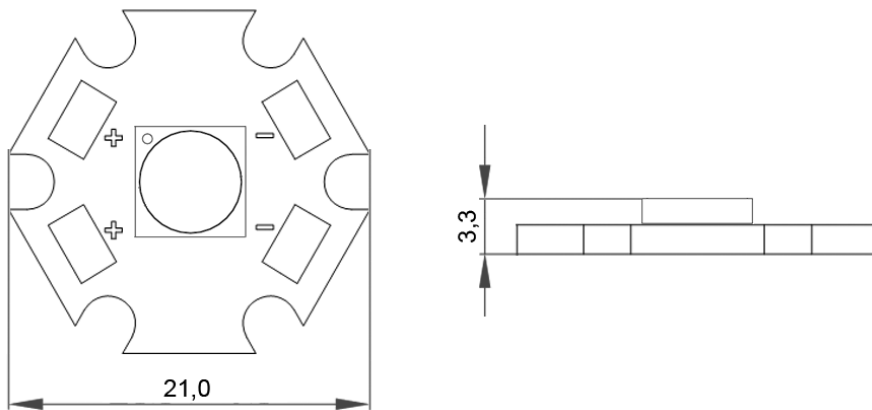
\*\*Radiated power measurement tolerance is ±10%





## Outline Dimensions

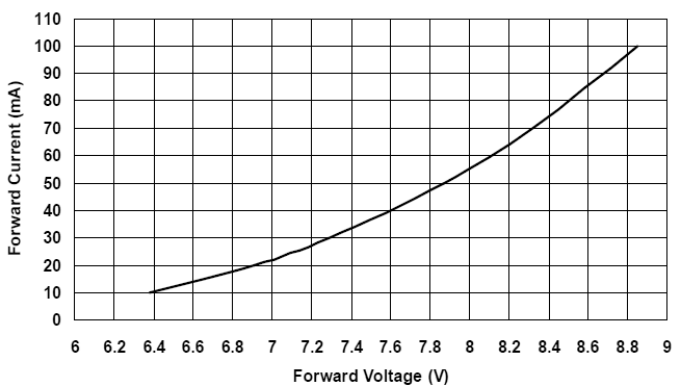
### PCB



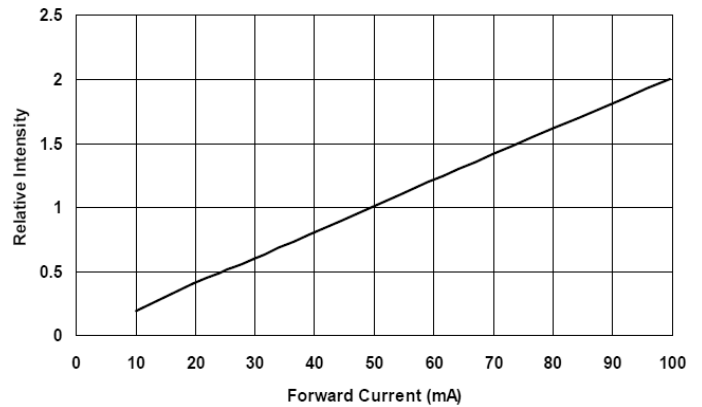
all dimensions in mm

## Performance Characteristics

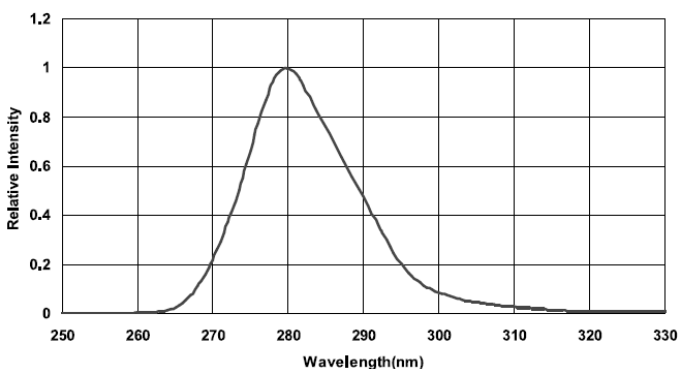
### Forward Current vs. Forward Voltage



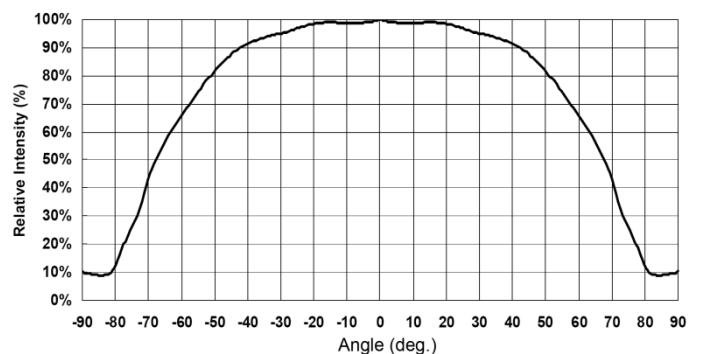
### Relative Intensity vs. Forward Current



### Spectrum



### Radiation Pattern





## Precautions

### Static Electricity

**LEDs are sensitive to electrostatic discharge (ESD).** Precautions against ESD must be taken when handling or operating these LEDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

### UV-Radiation

During operation these LEDs do emit **high intensity ultraviolet light**, which is hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted UV light. **Protective glasses are recommended.** It is further advised to attach a warning label on products/systems that do utilize UV-LEDs:

### Operation

#### **Do only operate LEDs with a current source.**

Running these LEDs from a voltage source *will* result in complete failure of the device.

Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory



### Cleaning

For **cleaning**, it is advised to use alcohol based solvents like **isopropyl alcohol**