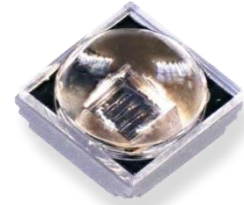




DUV310-SD351EL

- Deep Ultraviolet Light Emission Source
- 308nm, 18 mW @ 100 mA
- ESD protection
- SiO₂ lens
- Beam angle 60 deg.



Description

DUV310-SD351EL is an AlGaN based single emitter **DEEP-UV LED** with a typical peak wavelength of **308 nm** and an optical output power of typically **18 mW @ 100 mA** in a sealed 3535 metal SMD package. It features an **integrated ESD protection** device and quartz glass dome lens. **DUV310-SD351EL** is ready for reflow soldering process, and can be delivered on tape. Wavelength binning is available on request

Absolute Maximum Ratings



Parameter	Symbol	min.	max.	Unit
Forward Current	I_F		150	mA
Junction Temperature	T_J		90	°C
Operating Temperature	T_{OPR}	- 30	85	°C
Storage Temperature	T_{STR}	- 40	85	V

Electro-Optical Characteristics (T_{CASE} = 25°C, I_F = 100 mA)

Parameter	Symbol				Unit
		min.	typ.	max.	
Peak Wavelength*	λ_P	303	308	313	nm
Radiated Power**	P_O		18		mW
Spectral Width (FWHM)	$\Delta\lambda$		15		nm
Forward Voltage	V_F		5.4		V
Viewing Angle	$2\theta_{1/2}$		60		deg.

*Peak Wavelength measurement tolerance is ± 3 nm

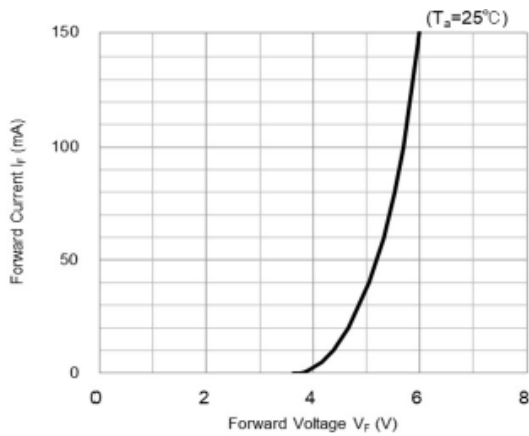
**Radiated power measurement tolerance is $\pm 10\%$

 WARNING	
	<ul style="list-style-type: none"> • LEDs emit very strong UV radiation. • Do not look at the LED light with the naked eye or irradiate the skin. UV radiation can harm your eyes and skin. • To prevent UV radiation exposure, wear protective eyewear and protective equipment. • If LEDs are embedded in devices, please indicate warning labels against the UV light LED used. • Keep out of reach of children.

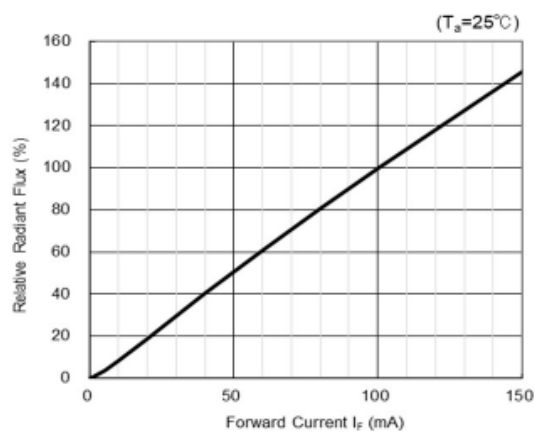


Performance Characteristics

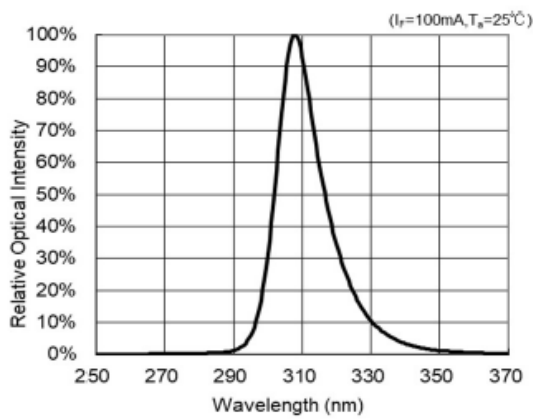
Forward Current vs. Forward Voltage



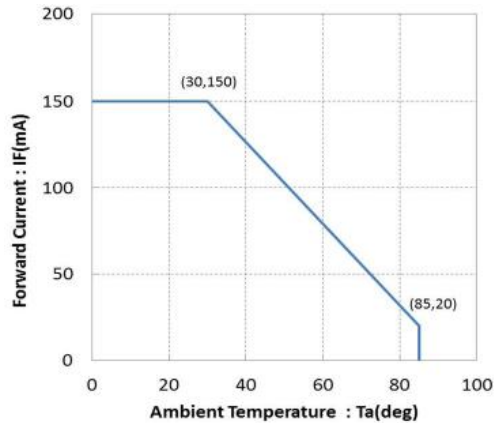
Rel. Optical Power vs. Forward Current



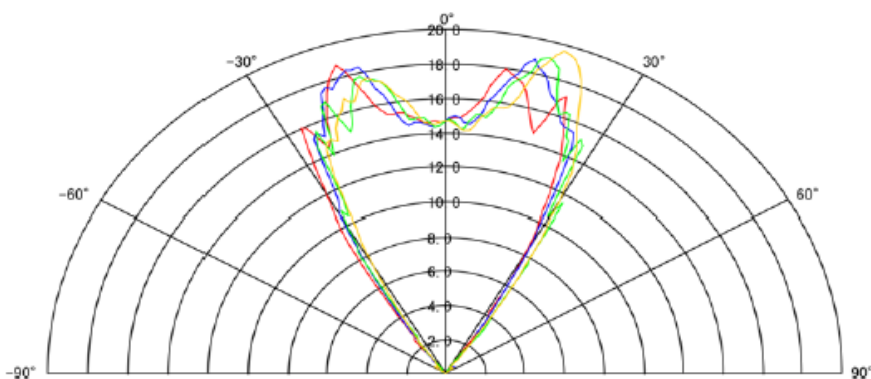
Spectrum



Forward Current vs Ambient Temperature



Radiation Pattern



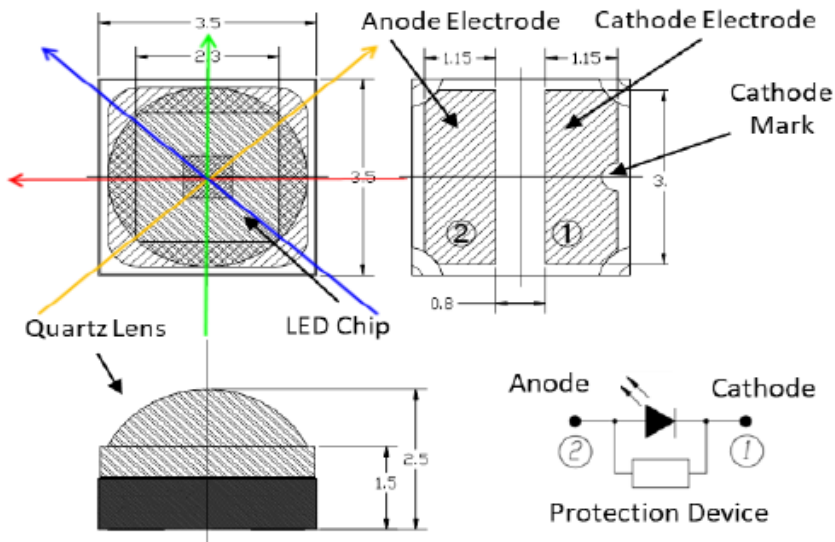
/

Intentionally blank



Outline Dimensions

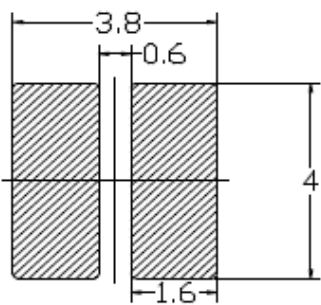
SMD 3535



all dimensions in mm

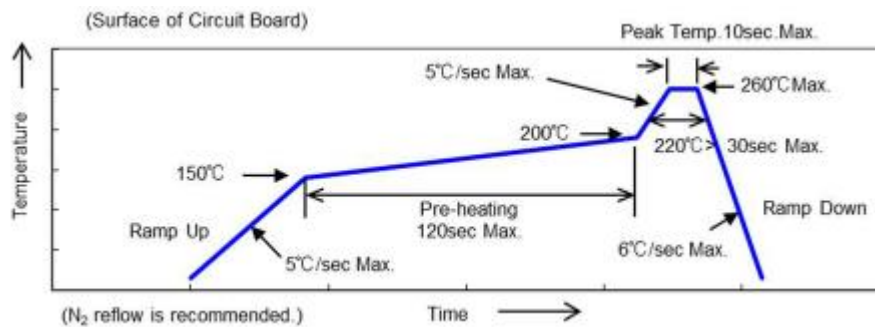
Soldering Information

Solder Pad Layout



- all dimensions in mm
- drawing not to scale

Reflow Soldering Profile

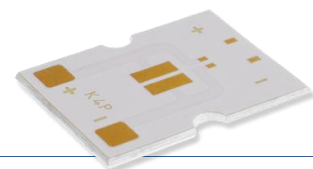


- JEDEC-J-STD-020C

Accessories

SD35-PCB

A printed **Cu circuit board** with Ni finish and Au contact plates, designed for easily soldering and mounting the SD35 series LEDs. Ideally suited for prototyping and evaluation





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.

Operating 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