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DUV325-SD353EN-03

- Deep Ultraviolet Light Emission Source
- 325nm, 50 mW @ 350 mA
- ESD protection
- SiO₂ Lens
- Beam angle 35 deg.



Description



DUV325-SD353EN-03 is an AlGaIn based single emitter **DEEP-UV LED** with a typical peak wavelength of **325 nm** and an optical output power of typically **50 mW @ 350 mA**. It comes in a sealed 3535 SMD package with **hemispherical quartz dome lens**, and features an **integrated ESD protection device**. **DUV325-SD353EN-03** is ready for reflow soldering process, and can be delivered on tape. A Cu circuit board (**SD35-PCB**) is available for convenient soldering/prototyping.

Absolute Maximum Ratings

Parameter	Symbol	min.	max.	Unit
Forward Current	I_F		600	mA
Reverse Voltage	U_R		5	V
Junction Temperature	T_J		90	°C
Operating Temperature	T_{OPR}	- 30	85	°C
Storage Temp. (no condensation)	T_{STR}	- 40	85	V

Electro-Optical Characteristics (T_{CASE} = 25°C, I_F = 350 mA)

Parameter	Symbol				Unit
		min.	typ.	max.	
Peak Wavelength*	λ_P	320	325	330	nm
Radiated Power**	P_O	35	50		mW
Spectral Width (FWHM)	$\Delta\lambda$		10		nm
Forward Voltage	V_F	3.8		6.2	V
Viewing Angle	$2\theta_{1/2}$		35		deg.

*Peak Wavelength measurement tolerance is ± 3 nm

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

WARNING

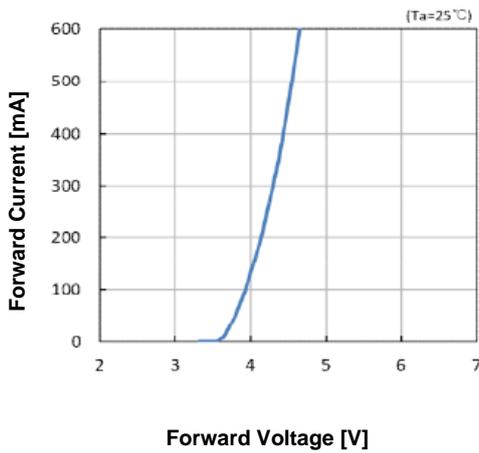


- LEDs emit very strong UV radiation.
- Do not look at the LED light with the naked eye or irradiate the skin.
- UV radiation can harm your eyes and skin.
- To prevent UV radiation exposure, wear protective eyewear and protective equipment.
- If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.
- Keep out of reach of children.

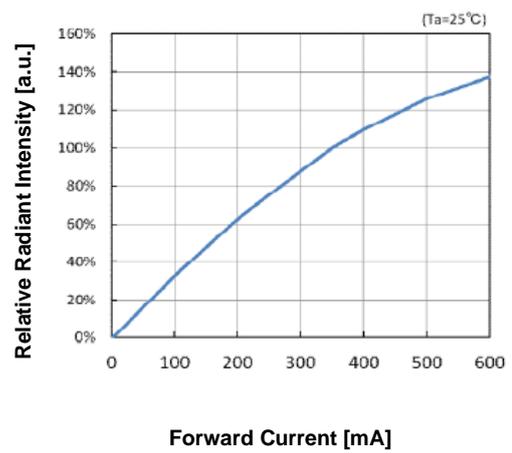


Typical Performance Curves

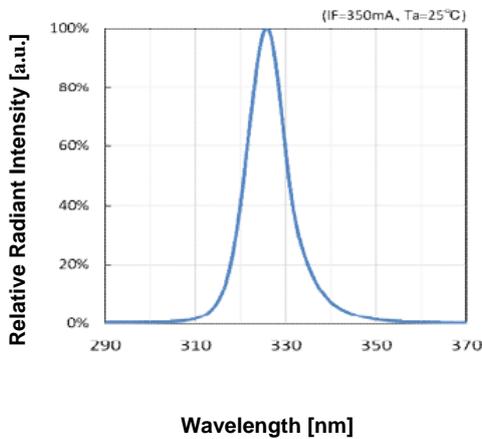
Forward Current vs. Forward Voltage



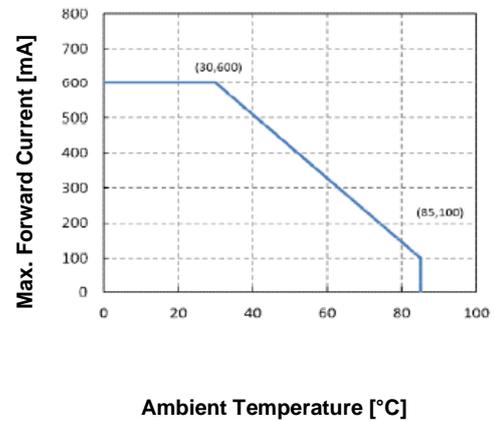
Relative Radiant Intensity vs. Forward Current



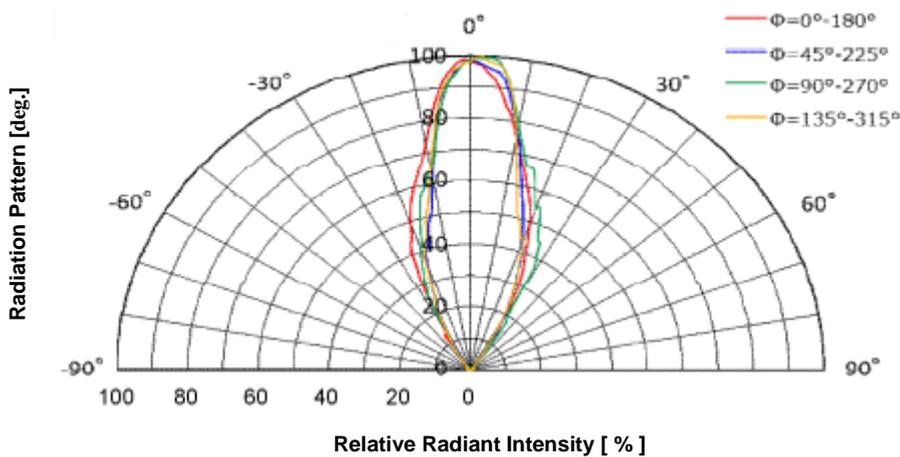
Spectrum



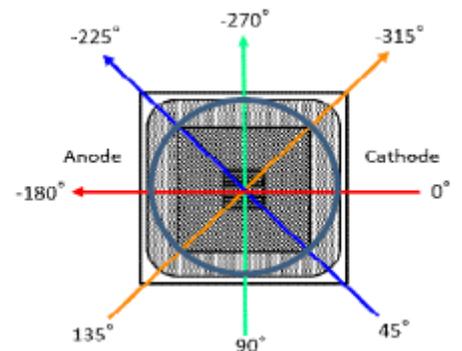
Max. Forward Current vs. Amb. Temperature



Radiation Pattern



Axial Distribution

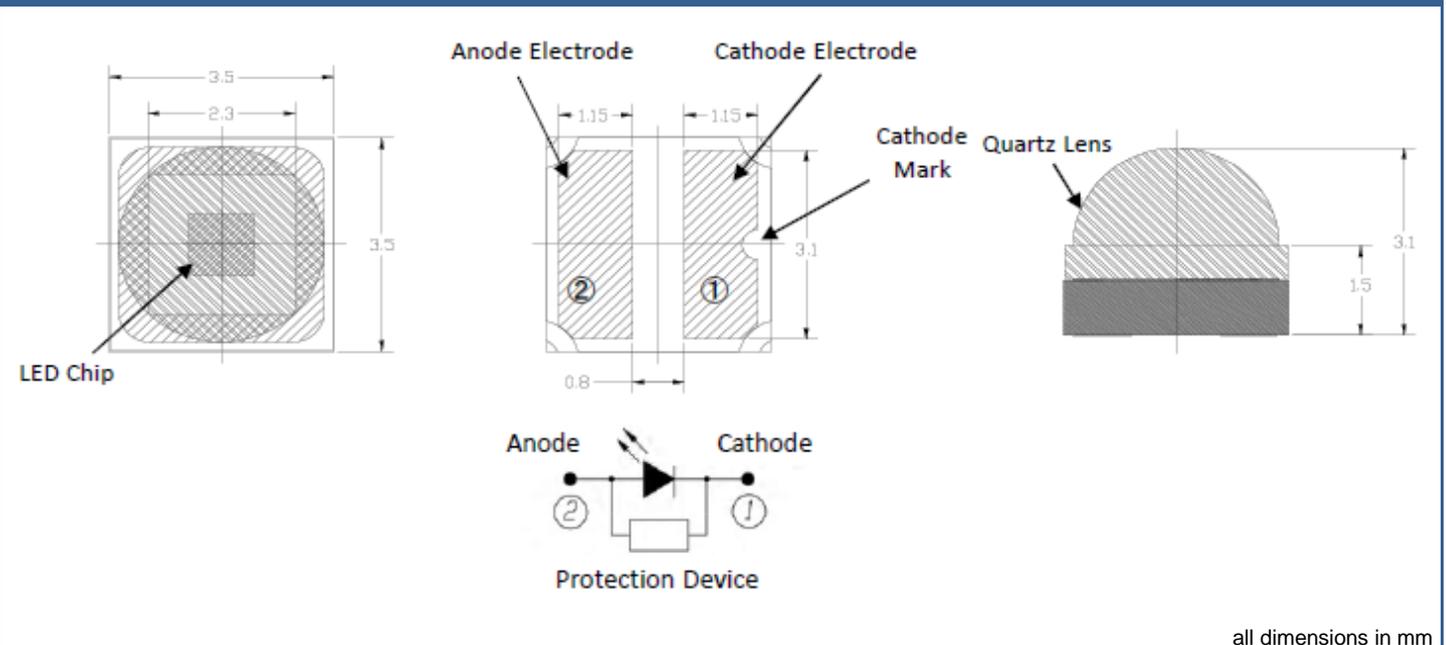




Outline Dimensions

SMD 3535

Bottom View

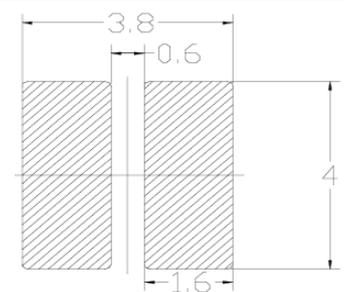
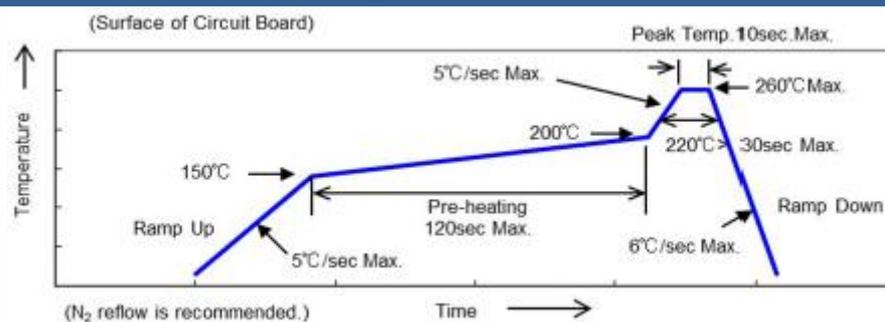


all dimensions in mm

Soldering

Recommended Reflow Soldering Profile

Recommended Soldering Pad Layout



all dimensions in mm

Accessories

SD35-PCB

Printed **Cu** circuit board with **Ni** finish and **Au** contact pads.

Designed for convenient soldering and mounting of SD35 series LED.
Recommended 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.

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

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