



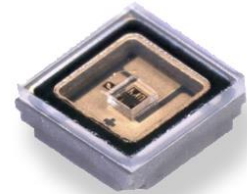
# ROITHNER LASERTECHNIK GmbH

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## DUV325-SD353EV

- Deep Ultraviolet Light Emission Source
- 325nm, 47mW @ 350 mA
- ESD protection
- Flat UV window
- Beam angle 120 deg.



### Description

**DUV325-SD353EV** is an AlGaIn based single emitter **DEEP-UV LED** with a typical peak wavelength of **325 nm** and an optical output power of typically **47 mW @ 350 mA** in a 3535 SMD package. It features an **integrated ESD protection** device and UV glass window. **DUV325-SD353EV** is ready for reflow soldering process, and can be delivered on tape.

### Absolute Maximum Ratings



Parameter	Symbol	min.	max.	Unit
Forward Current	$I_F$		350	mA
<b>Junction Temperature</b>	$T_J$		<b>90</b>	<b>°C</b>
Operating Temperature	$T_{OPR}$	- 30	85	°C
Storage Temperature	$T_{STR}$	- 40	85	V

### Electro-Optical Characteristics (T<sub>CASE</sub> = 25°C, I<sub>F</sub> = 350 mA)

Parameter	Symbol	min.	typ.	max.	Unit
Peak Wavelength*	$\lambda_P$	320	325	330	nm
<b>Radiated Power**</b>	$P_O$	<b>30</b>	<b>47</b>		<b>mW</b>
Spectral Width (FWHM)	$\Delta\lambda$		15	20	nm
Forward Voltage	$V_F$		5.5		V
<b>Viewing Angle</b>	$2\theta_{1/2}$		<b>120</b>		<b>deg.</b>

\*Peak Wavelength measurement tolerance is  $\pm 3$ nm

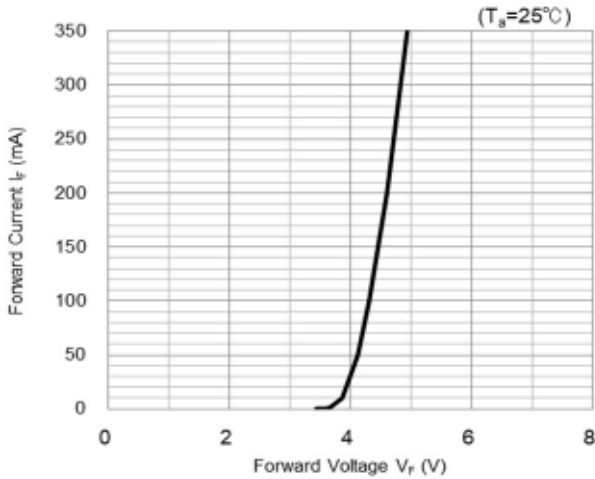
\*\*Radiated power measurement tolerance is  $\pm 10\%$

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

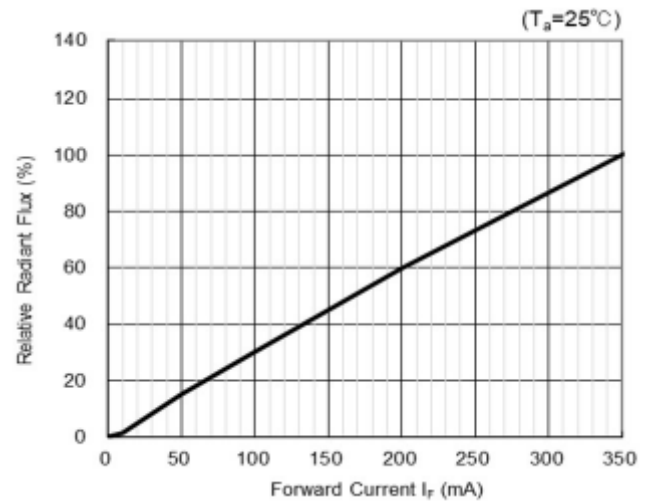


## Performance Characteristics

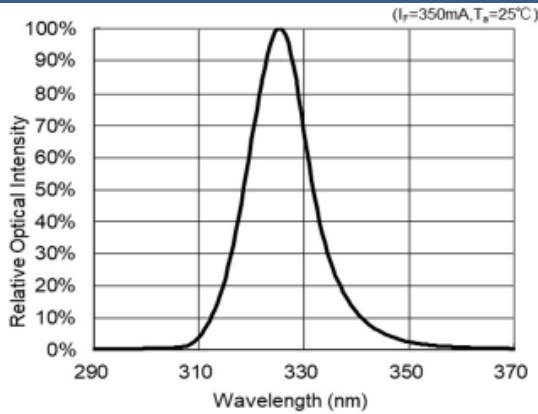
Forward Current vs. Forward Voltage



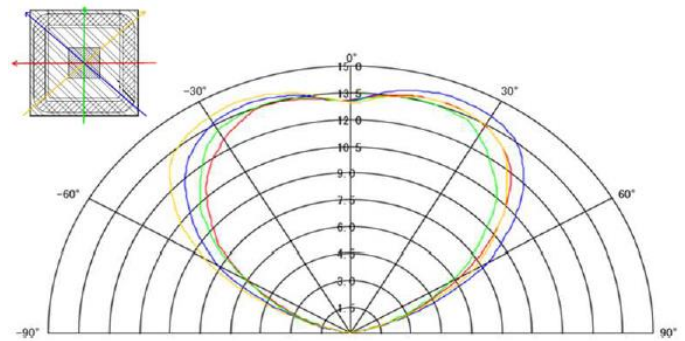
Forward Current vs. Relative Radiant Flux [%]



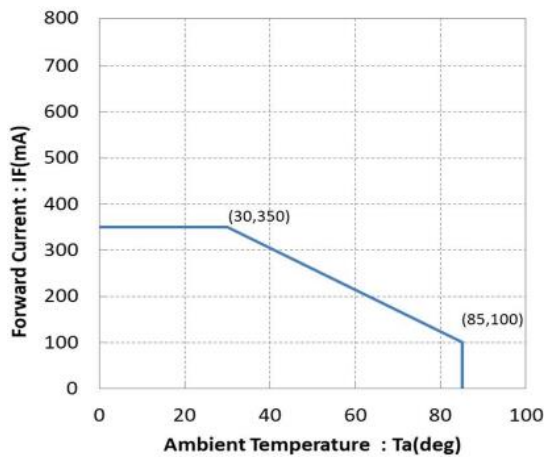
Spectrum



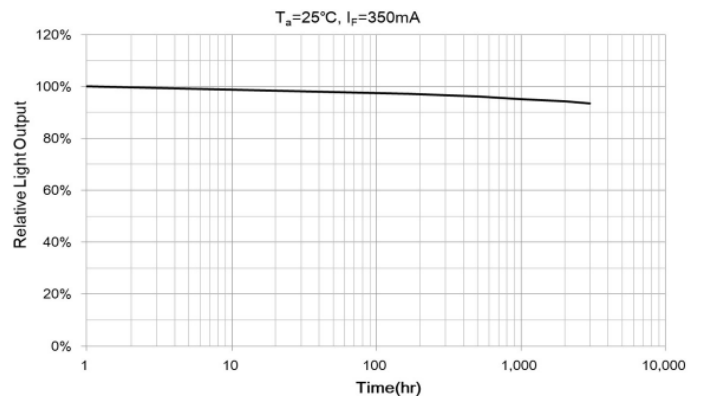
Radiation Pattern



Forward Current vs. Ambient Temperature



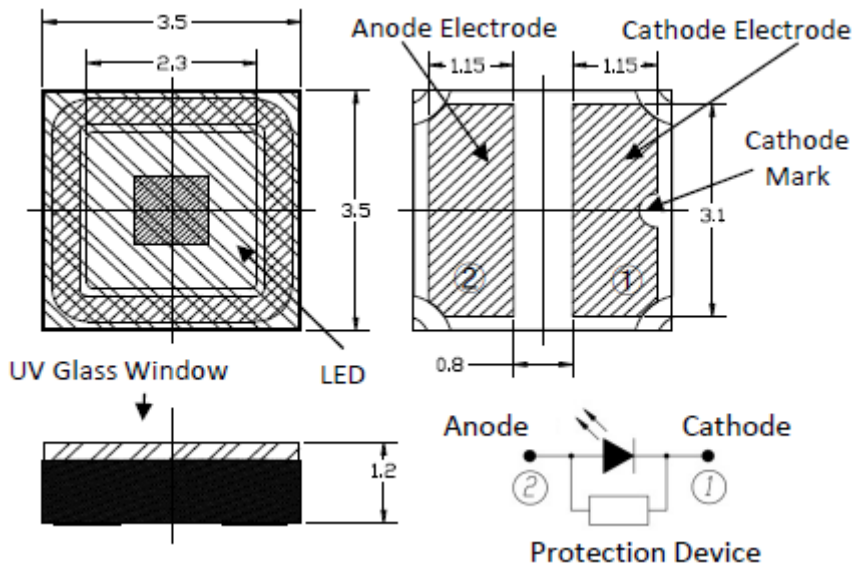
Life Time





## Outline Dimensions

### SMD 3535

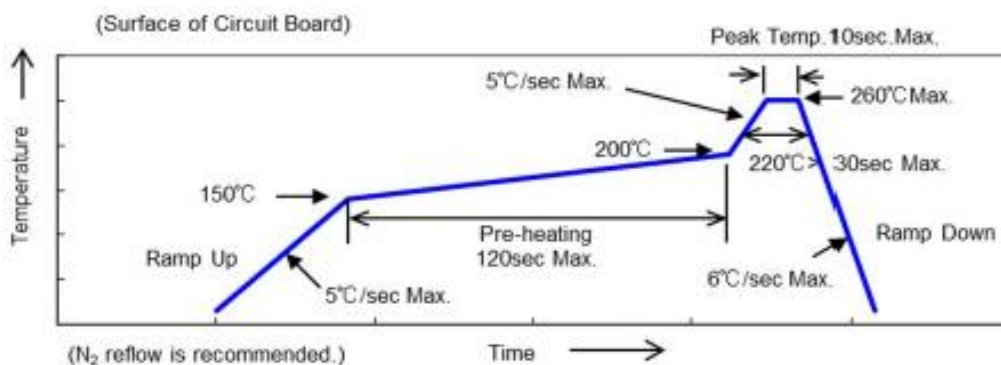


all dimensions in mm

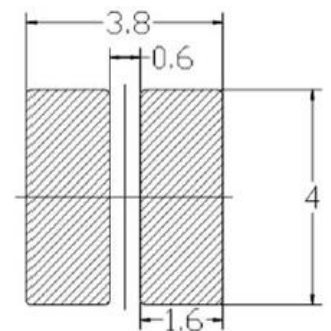
## Soldering

### SMD 3535

#### Reflow soldering profile



#### Recommended solder pad



all dimensions in mm

## 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.**

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