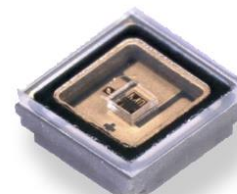




## DUV340-SD353EV-01

- Deep Ultraviolet Light Emission Source
- 340nm, 70 mW @ 350 mA
- ESD protection
- Flat UV glass window
- Beam angle 120 deg.



### Description

DUV340-SD353EV-01 is an AlGaIn based single emitter **DEEP-UV LED** with a typical peak wavelength of **340 nm** and an optical output power of typically **70 mW @ 350 mA** in a 3535 SMD package. It features an **integrated ESD protection** device and UV glass window. **DUV340-SD353EV-01** is ready for reflow soldering process, and can be delivered on tape.

### Absolute Maximum Ratings

Parameter	Symbol	min.	max.	Unit
Forward Current	$I_F$		600	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	°C

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

Parameter	Symbol	min.	typ.	max.	Unit
Peak Wavelength*	$\lambda_P$	335	340	345	nm
<b>Radiated Power**</b>	$P_O$	<b>45</b>	<b>70</b>		<b>mW</b>
Spectral Width (FWHM)	$\Delta\lambda$		9	15	nm
Forward Voltage	$V_F$	4.0	4.8	5.5	V
<b>Viewing Angle</b>	$2\Theta_{1/2}$		<b>120</b>		<b>deg.</b>
Thermal Resistance	$R_{th}$		10		K/W

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

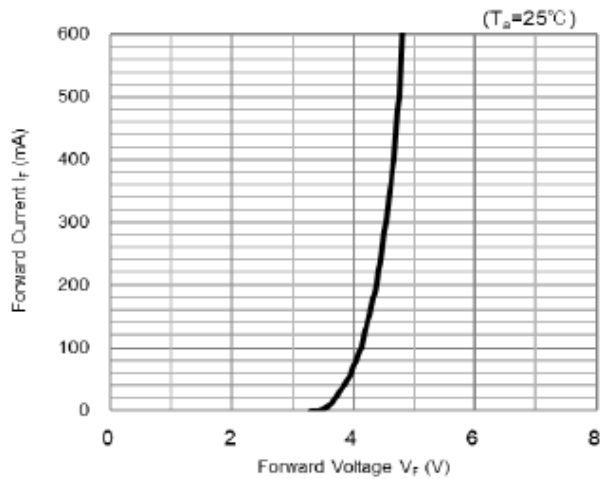
\*\*Radiated power measurement tolerance is  $\pm 10\%$

	<h2 style="margin: 0;">WARNING</h2>
	<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>

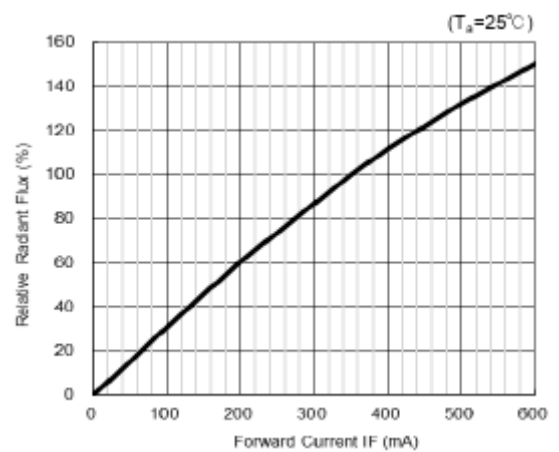


## Performance Characteristics

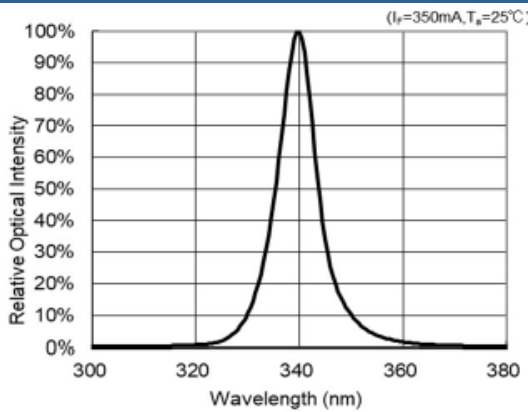
### Forward Current vs. Forward Voltage



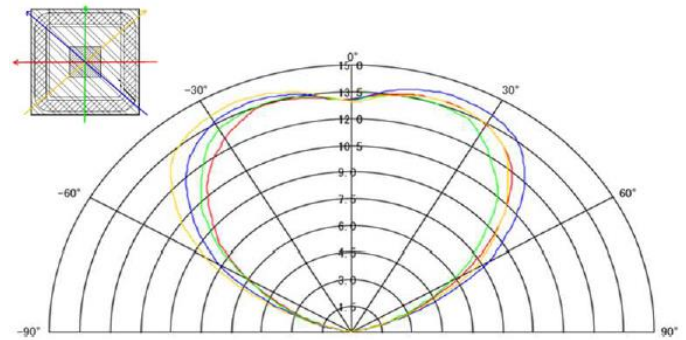
### Forward Current vs. Relative Radiant Flux [%]



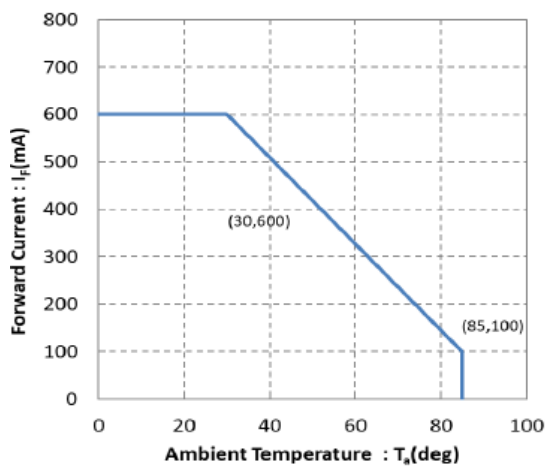
### Spectrum



### Radiation Pattern



### Forward Current vs. Ambient Temperature



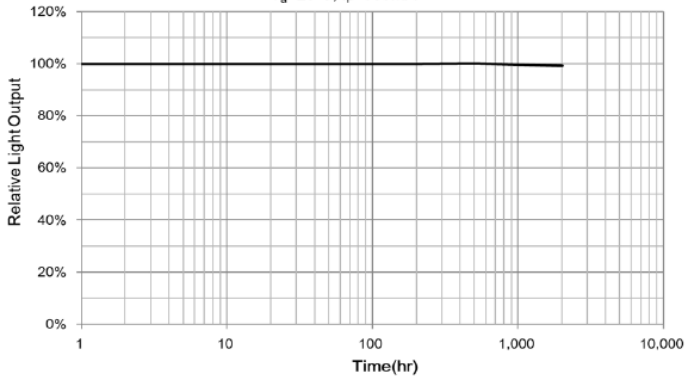
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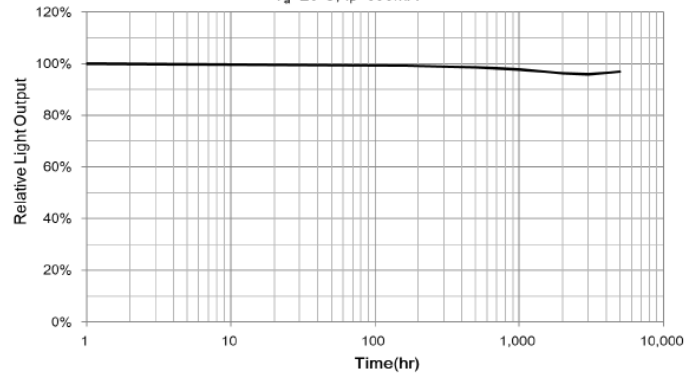
## Life Time @ 350 mA

$T_a=25^{\circ}\text{C}$ ,  $I_f=350\text{mA}$



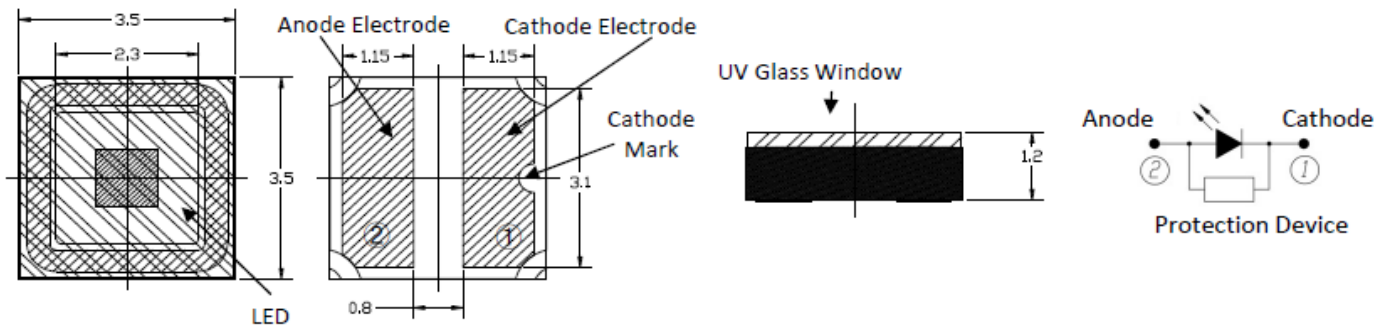
## Life Time @ 600 mA

$T_a=25^{\circ}\text{C}$ ,  $I_f=600\text{mA}$



## Outline Dimensions

### SMD 3535

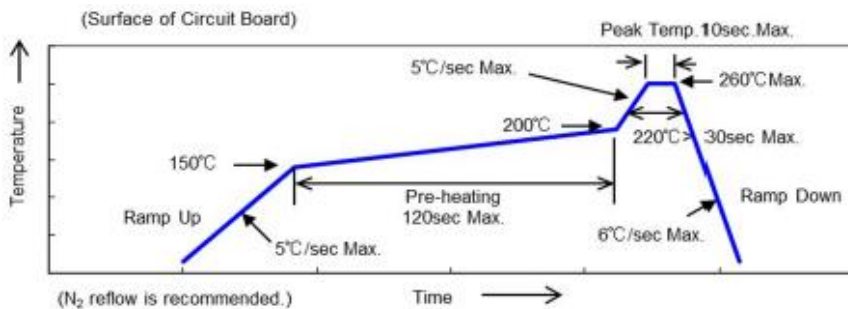


all dimensions in mm

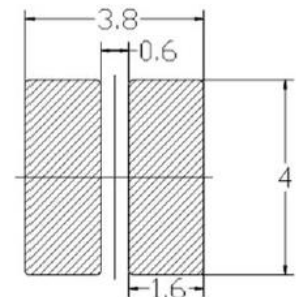
## Soldering

### 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