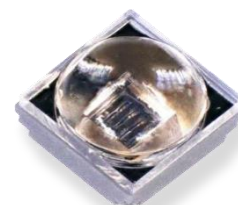




DUV340-SD353EL-01

- Deep Ultraviolet Light Emission Source
- 340nm, 65 mW @ 350 mA
- ESD protection
- Flat UV glass window
- Beam angle 65 deg.



Description

DUV340-SD353EL-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 **65 mW @ 350 mA** in a 3535 SMD package. It features an **integrated ESD protection** device and UV glass window. **DUV340-SD353EL-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
Junction Temperature	T_J		90	°C
Operating Temperature	T_{OPR}	- 30	85	°C
Storage Temperature	T_{STR}	- 40	85	°C

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

Parameter	Symbol	min.	typ.	max.	Unit
Peak Wavelength*	λ_P	335	340	345	nm
Radiated Power**	P_O	43	65		mW
Spectral Width (FWHM)	$\Delta\lambda$		9	15	nm
Forward Voltage	V_F	4.0	4.8	5.5	V
Viewing Angle	$2\theta_{1/2}$		65		deg.
Thermal Resistance	R_{th}		10		K/W

*Peak Wavelength measurement tolerance is ± 3 nm

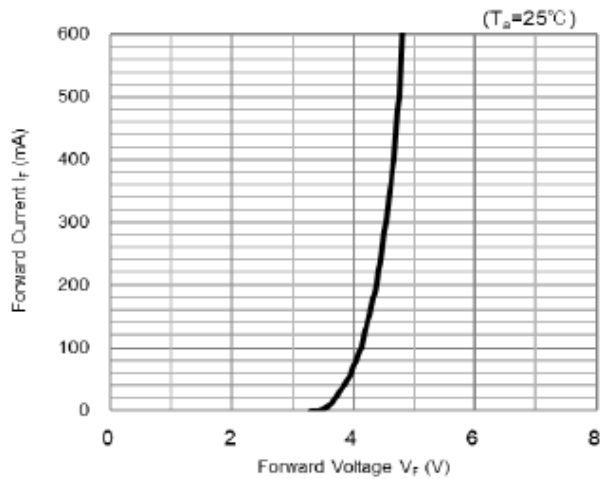
**Radiated power measurement tolerance is $\pm 10\%$

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

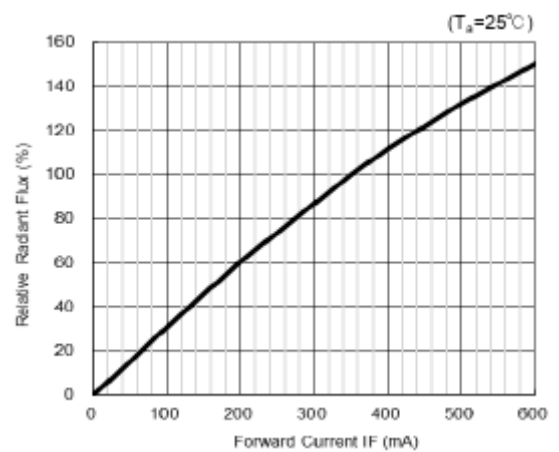


Performance Characteristics

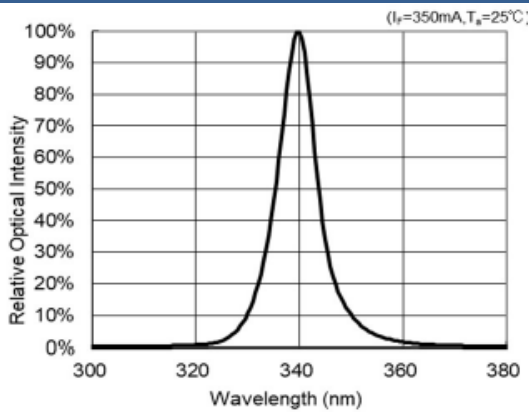
Forward Current vs. Forward Voltage



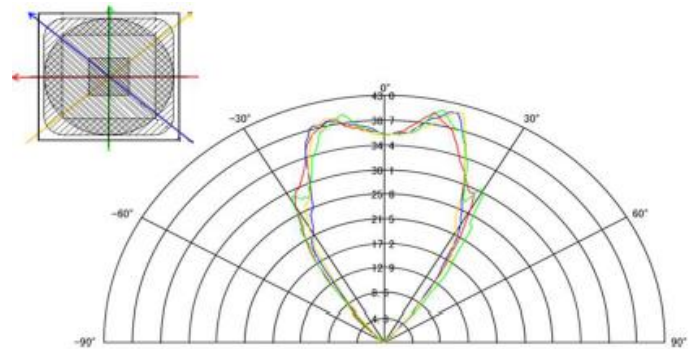
Forward Current vs. Relative Radiant Flux [%]



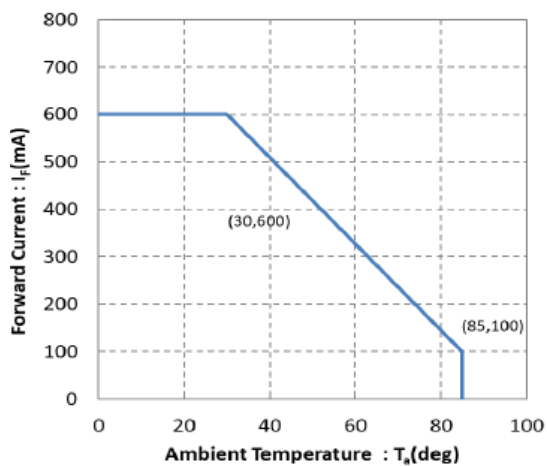
Spectrum



Radiation Pattern



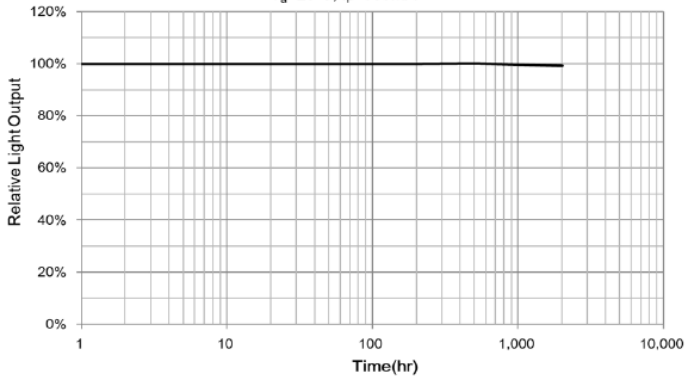
Forward Current vs. Ambient Temperature





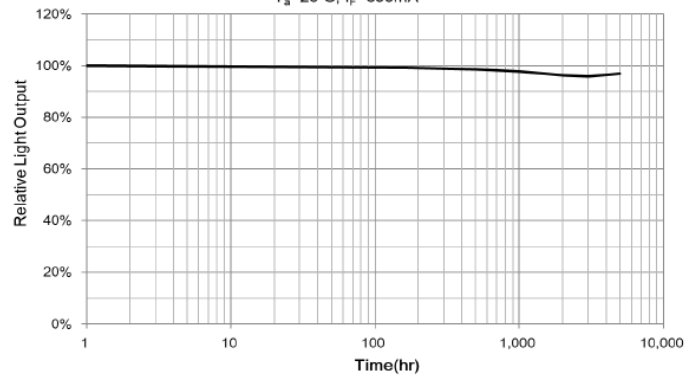
Life Time @ 350 mA

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



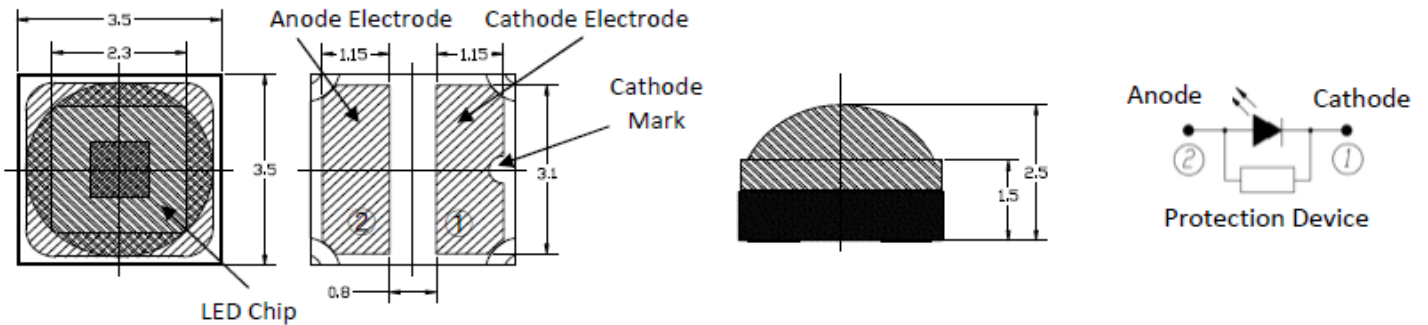
Life Time @ 600 mA

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



Outline Dimensions

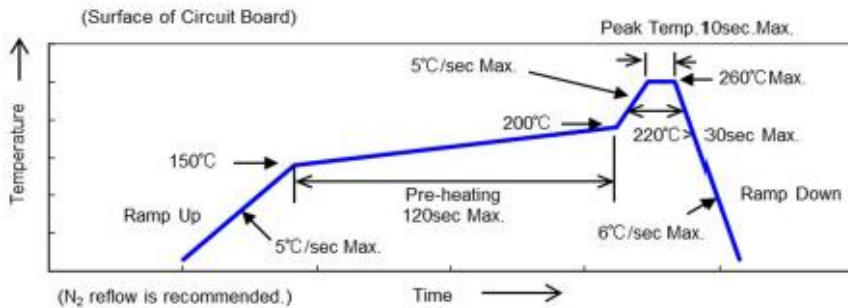
SMD 3535



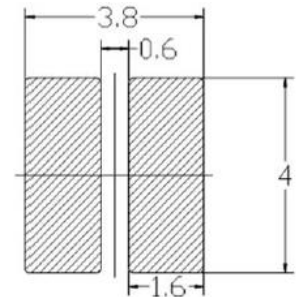
Soldering

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