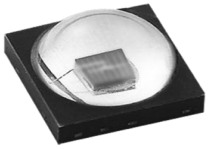
COMPACT IR EMITTER

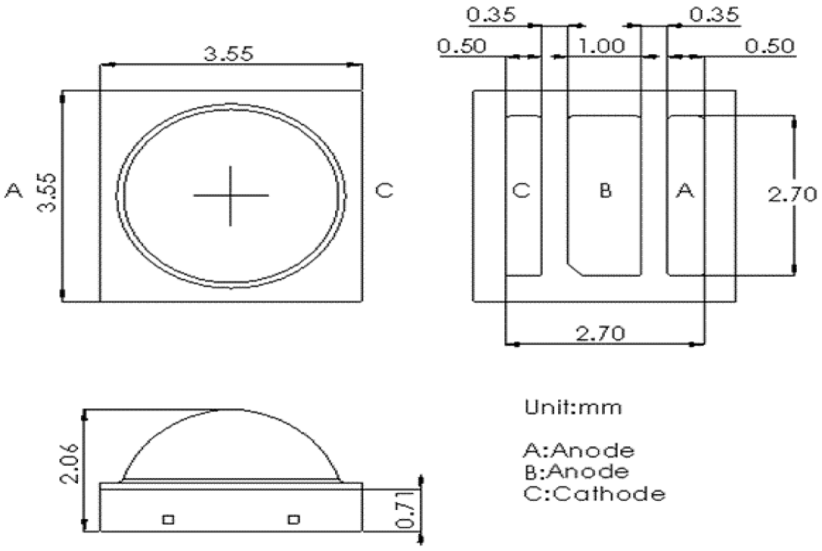
P/N: RAU-3440-S000



Features

- ✓ Compact dimensions: 3.55 mm × 3.55 mm × 2.05mm
- ✓ Peak wavelength:λ_p = 940 nm
- ✓ High power operation
- ✓ View angle: θ = 125°±10°
- ✓ Low thermal resistance

- ✓ ESD : 2 kV min. (HBM)
- ✓ Environmental friendly ; RoHS compliance
- ✓ Weight: 0.034g/pcs



Unit: mm
Tolerance:±0.15mm

RoHS COMPLIANT

Room Temperature Opto-Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage(1)	V_F	I_F = 0.35 A, t_p=100 μs	--	1.55	--	V
Wavelength	λ_p	I_F = 0.35 A, t_p=100 μs		940		nm
Radiant Intensity(2)	I_e	I_F = 0.35 A, t_p=100 μs		80		mW/sr
Radiant Power	Φ_e	I_F = 0.35 A		220		mW
View Angle	θ			125		deg

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage(1)	V_F	I_F = 1.0 A, t_p=100 μs	--	1.75	--	V
Wavelength	λ_p	I_F = 1.0 A, t_p=100 μs		940		nm
Radiant Intensity(2)	I_e	I_F = 1.0 A, t_p=100 μs		210		mW/sr
Radiant Power	Φ_e	I_F = 1.0 A		600		mW
View Angle	θ			125		deg

(1). Forward Voltage tolerance is ±0.1 V

(2). Radiant Intensity tolerance is ±10%

Temperature-dependent Opto-Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage(1)	V_F	I_F = 0.35 A, t_p=100 μs		-1.5		mV/°C
Wavelength	λ_p	I_F = 0.35 A, t_p=100 μs		0.23		nm/°C
Radiant Intensity(2)	I_e	I_F = 0.35 A, t_p=100 μs		- 0.3		%/°C
Radiant Power	Φ_e	I_F = 0.35 A, t_p=100 μs		- 0.3		%/°C

Absolute Maximum Ratings

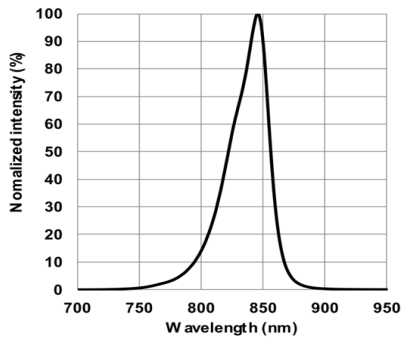
Parameter	Symbol	VALUE	Unit
DC Forward Current(1)	I_F	1	A
Power Consumption	P_{tot}	1.8	W
Reverse Voltage	V_R	5	V
Surge Forward Current*(t_p=100μ s)	I_{FS}	1	A
Junction Temperature	T_J	140	°C
Storage Temperature	Ts	-40 ~ 125	°C
Operation Temperature	T_{op}	-40 ~ 85	°C
Thermal Resistance –solder point	R_{thJS}	15	k/W
Electrostatic Discharge (HBM)	ESD	2000	V

(1) Proper current rating must be observed to maintain junction temperature below maximum at all time.

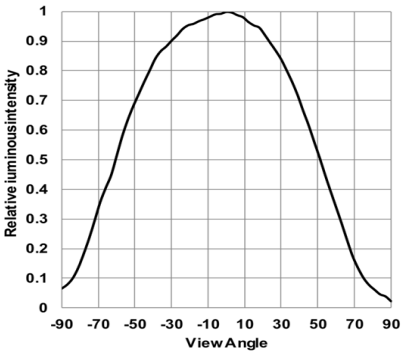
(2) JEDEC J-STD-020 Latest version compliant. See profile and conditions in following page.

RoHS COMPLIANT

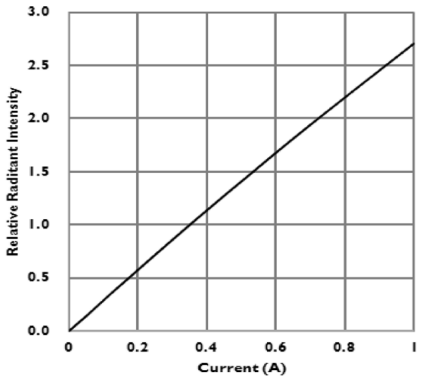
Emission Spectrum



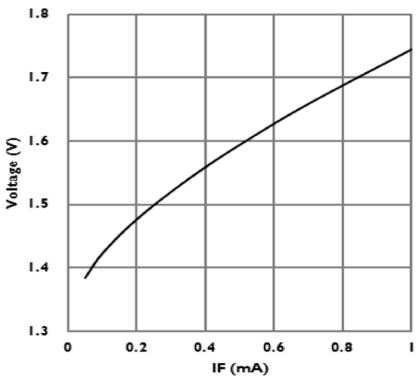
Radiation Pattern



Light output vs. Current



Voltage vs. Current



Max. permissible forward current