

GaAlAs Infrared Emitter

OPE5794

The **OPE5794** is GaAlAs infrared emitting diode that is designed for high radiant intensity and low forward voltage. This device is optimized for efficiency at emission wavelength 940nm and has a high radiant efficiency over a wide range of forward current. This device is packaged T1 plastic package and has medium beam angle with lensed package and cup frame

FEATURES

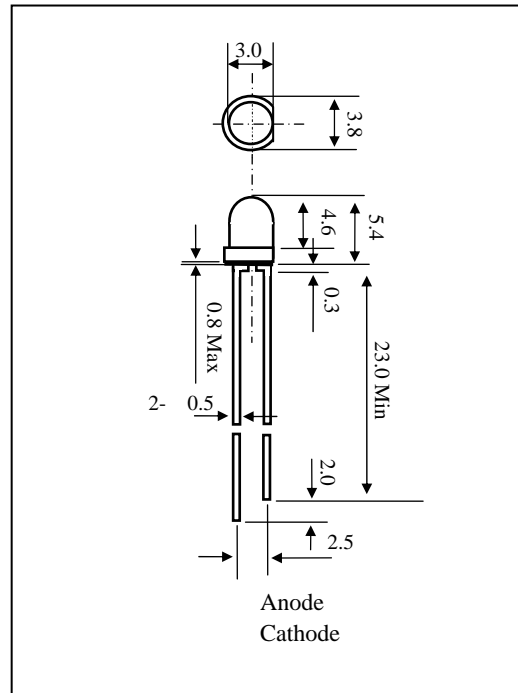
- High-output power
- Medium beam angle
- Available for pulse operating

APPLICATIONS

- Optical emitters
- Optical switches
- Smoke sensors
- IR remote control
- IR sound transmission

* Please take proper steps in order to secure reliability and safety in required conditions and environments for this device.

DIMENSIONS (Unit:mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Power dissipation	P_D	80	mW
Forward current	I_F	60	mA
Pulse forward current	I_{FP}	0.8	A
Reverse voltage	V_R	5.0	V
Operating temp.	Topr.	-20~ +70	°C
Storage temp.	Tstg.	-20~ +80	°C
Soldering temp.	Tsol. ^{*2}	240.	°C

¹.Duty ratio = 1/100, pulse width=0.12ms.

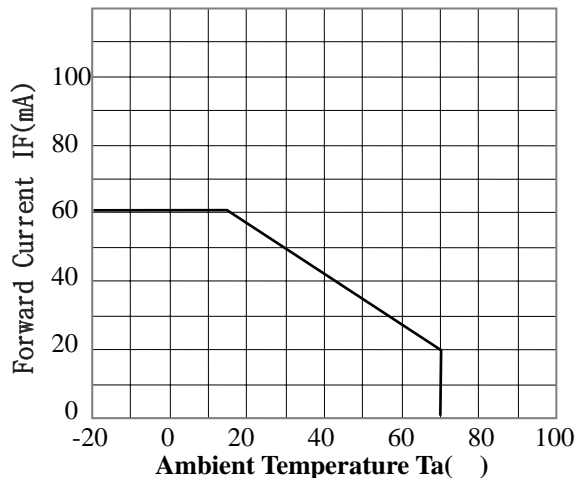
^{*2}.Lead Soldering Temperature (2mm from case for 5sec.).

ELECTRO-OPTICAL CHARACTERISTICS

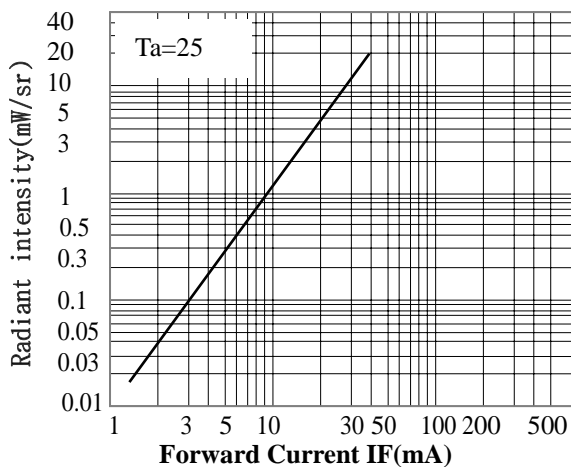
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F=40\text{mA}$		1.2	1.5	V
Reverse current	I_R	$V_R=5\text{V}$			10	μA
Capacitance	C_t	$f=1\text{MHz}$		20		pF
Radiant intensity	I_e	$I_F=40\text{mA}$		20		mW/sr
Peak emission wavelength	λ_p	$I_F=40\text{mA}$		940		nm
Spectral bandwidth 50%		$I_F=40\text{mA}$		45		nm
Half angle		$I_F=40\text{mA}$		± 17		deg.

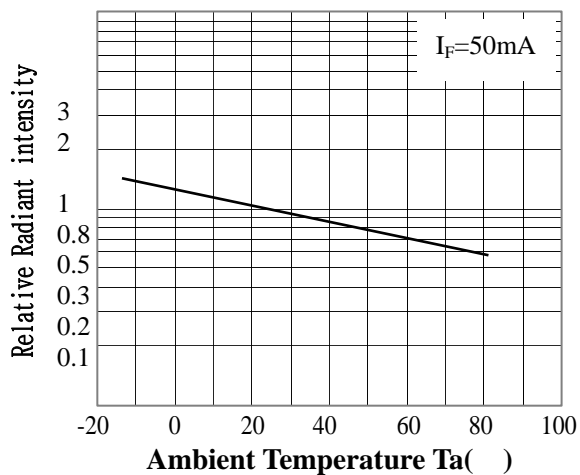
- FORWARD CURRENT Vs. AMBIENT TEMP.



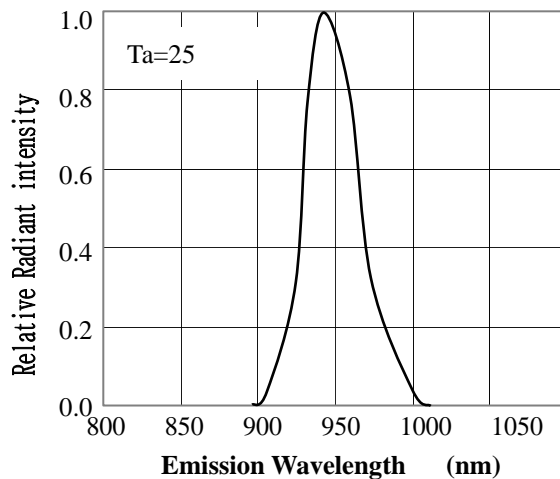
- RADIANT INTENSITY Vs. FORWARD CURRENT.



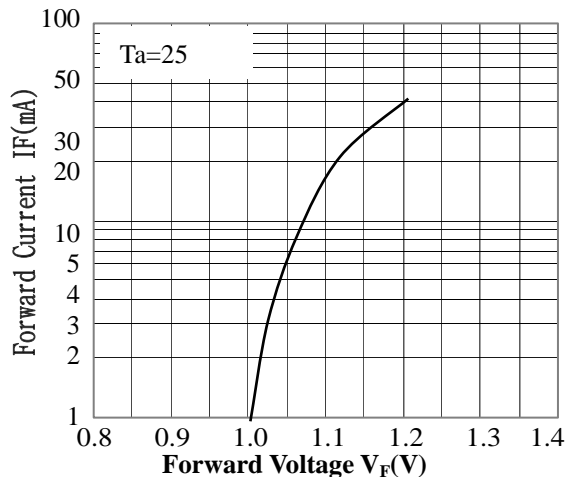
- RELATIVE RADIANT INTENSITY Vs. AMBIENT TEMP.



- RELATIVE RADIANT INTENSITY Vs. EMISSION WAVELENGTH.



- FORWARD CURRENT Vs. FORWARD VOLTAGE



- ANGULAR DISPLACEMENT Vs. RELATIVE RADIANT INTENSITY

