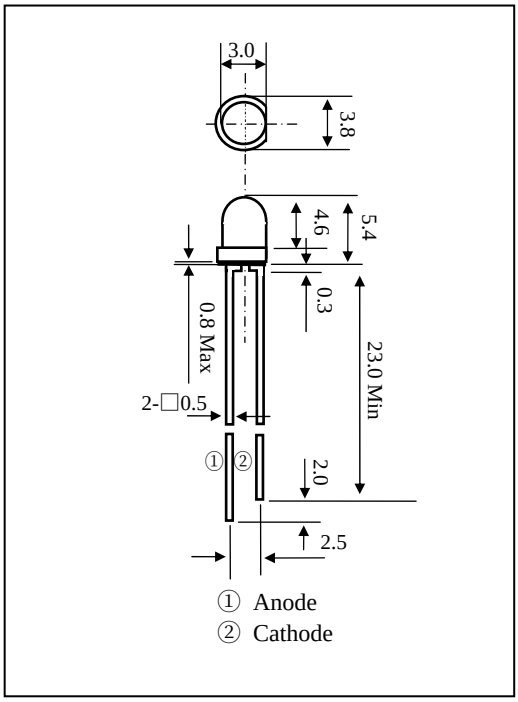
GaAlAs Infrared Emitter

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

DIMENSIONS (Unit:mm)



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.

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. *2	Tsol.	240.	°C

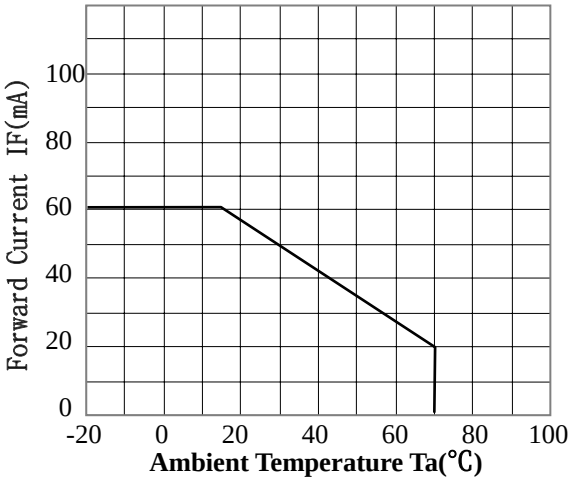
*1.Duty ratio = 1/100, pulse width=0.12ms.

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

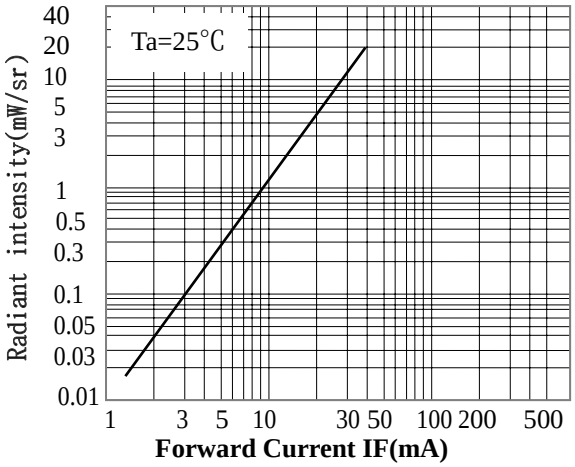
ELECTRO-OPTICALCHARACTERISTICS (Ta=25°C)

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

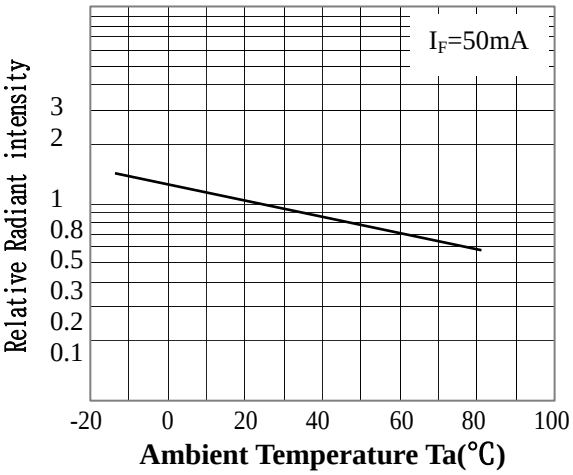
- **FORWARD CURRENT Vs. AMBIENT TEMP.**



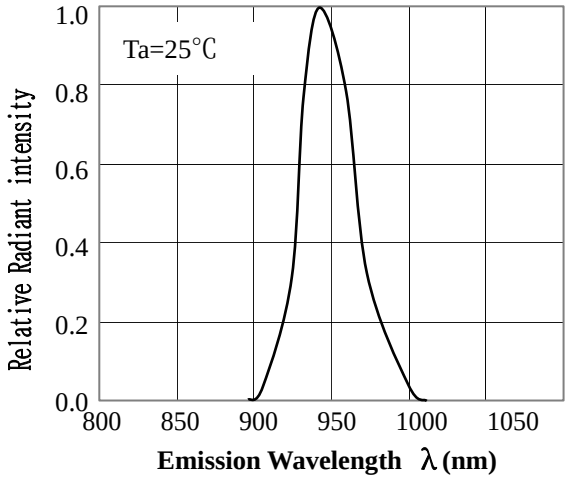
- **RADIANT INTENSITY Vs. FORWARD CURRENT.**



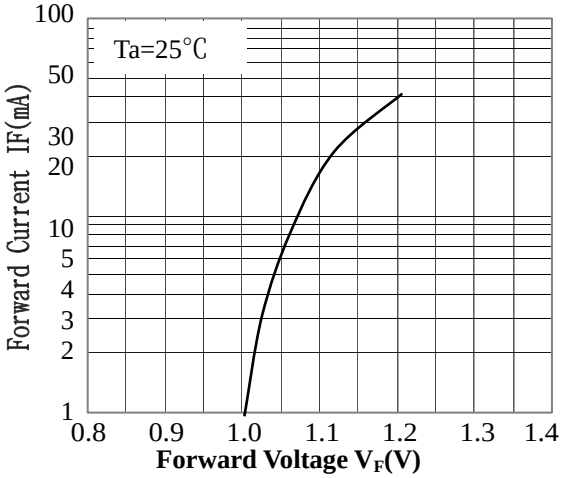
- **RELATIVE RADIANT INTENSITY Vs. AMBIENT TEMP.**



- **RELATIVE RADIANT INTENSITY Vs. EMISSION WAVELENGTH.**



- **FORWARD CURRENT Vs. FORWARD VOLTAGE**



- **ANGULAR DISPLACEMENT Vs RELATIVE RADIANT INTENSITY**