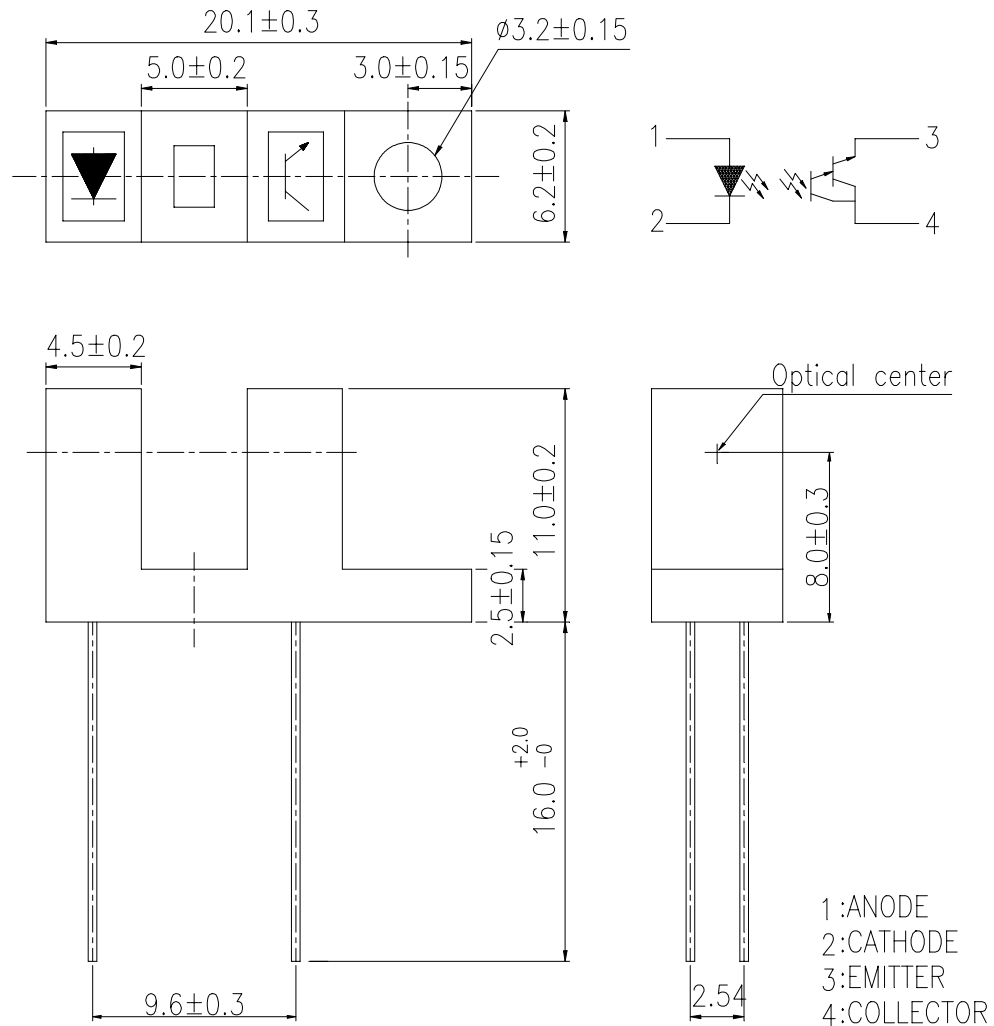


■ PACKAGE DIMENSIONS :



UNIT: mm

ABOVE SPECIFICATION MAY BE CHANGED WITHOUT NOTICE. SUPPLIER'S WILL RESERVE AUTHORITY ON MATERIAL CHANGE FOR ABOVE SPECIFICATION.

DESIGNER	CHECKER	APPROVED

Office: NO 25, Lane 76, Chung Yang Rd., Sec.3
Tucheng, Taipei 236, Taiwan, R.O.C.
TEL: 886-2-2267-2000, 2267-9936 (22 Lines)
FAX: 886-2-2267-6189

DESCRIPTION

The ITR9813 is a gallium aluminum arsenic infrared emitting diode coupled with a silicone photodarlington in a plastic housing. The gap in the housing provides a means of interrupting the signal with tape, cards, or other opaque material, switching the output from an "ON" state to an "OFF" state.

FEATURES

ITR:

- Fast response time

APPLICATIONS

- Printer
- Opto-electronic Switch
- Scanner

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Parameter		Symbol	Rating	Unit
INPUT	POWER DISSIPATION	Pd	75	mW
	REVERSE VOLTAGE	Vr	5	V
	FORWARD CURRENT	If	50	mA
	PEAK FORWARD CURRENT (*1)	Ifp	1	A
OUTPUT	COLLECTOR POWER DISSIPATION	Pc	100	mW
	COLLECTOR CURRENT	Ic	50	mA
	C-E BREAKDOWN VOLTAGE	BVceo	15	V
	E-C BREAKDOWN VOLTAGE	BVeco	5	V
OPERATING TEMPERATURE		Topr	-25~+85	°C
STORAGE TEMPERATURE		Tstg	-40~+100	°C
SOLDERING TEMPERATURE (*2)		Tsol	260	°C

(*1) $t_w=100 \mu\text{Sec.}$, $T=10 \text{ mSec.}$ (*2) 1/16 inch from body for 5 sec

■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Input	Forward Voltage	V_F	---	1.2	1.6	V	$I_F=10\text{mA}$
	Reverse Current	I_R	---	---	10	μA	$V_R=5\text{V}$
	Peak Wavelength	λ_P	---	940	---	nm	
Output	Dark Current	I_{CE0}	---	---	1000	nA	$V_{CE}=10\text{V}$ $E_e=0\text{mw/cm}^2$
	C-E Saturation Voltage	V_{CE} (sat)	---	---	1.0	V	$I_C=15\text{mA}$ $I_B=100\mu\text{A}$
Light current		I_L	4.0	---	---	mA	$V_{CE}=2\text{V}$ $I_F=10\text{mA}$
Speed	Rise time	T_R	---	50	---	μsec	$V_{CE}=5\text{V}$ $I_C=10\text{mA}$ $R_L=100\Omega$
	Fall time	T_F	---	60	---	μsec	

■ Package Style

150pcs/Every bag

4 Bags(160pcs)/Box

10 Boxes(1600pcs)/Carton

■ TYPICAL CHARACTERISTICS FOR IR

Fig. 1 Forward Current vs. Ambient Temperature

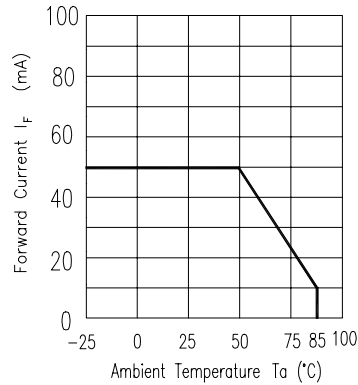


Fig. 2 Spectral Distribution

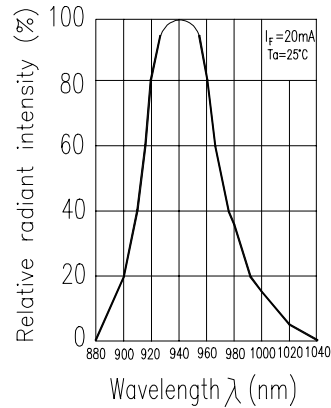


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

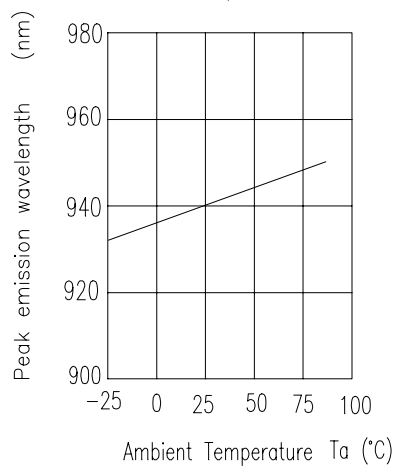


Fig. 4 Forward Current vs. Forward Voltage

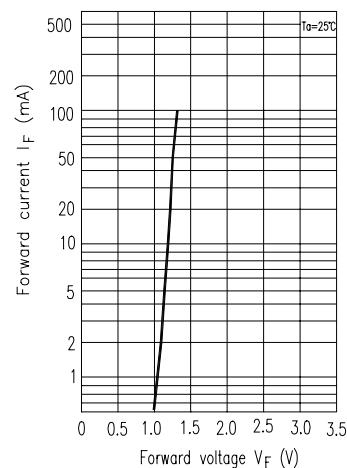


Fig. 5 Relative Radiant Flux vs. Ambient Temperature

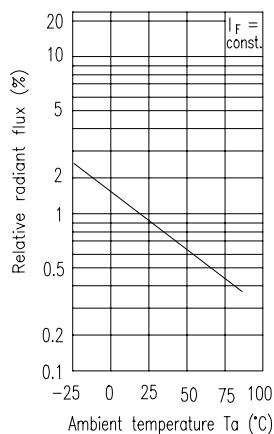
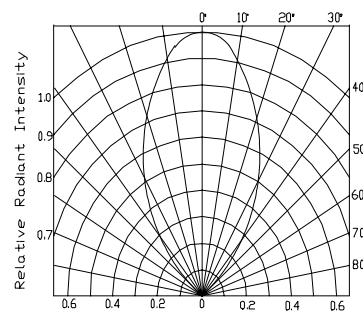


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



TYPICAL CHARACTERISTICS FOR PT

