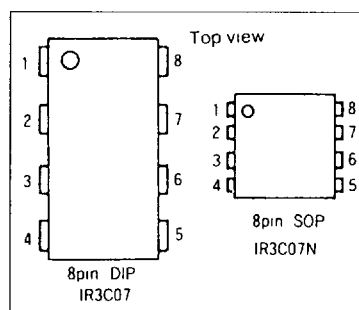


IR3C07/IR3C07N

Pin Assignment

IR3C07/IR3C07N		
Pin No.	Symbol	Function
1	OUT	Output
2	Cp	Phase Compensation
3	IM	Monitor input
4	GND	Ground
5	INH	Inhibit input (on/off)
6	So	Operating signal (output)
7	V _{CC}	Control Circuit Power Supply
8	V _{PS}	Laser Drive Power Supply



Absolute Maximum Ratings

Parameter	Symbol	Remarks	Ratings	Unit
			IR3C07/IR3C07N	
Supply Voltage	V _{CC}	Pin ⑦	10	V
Supply Voltage	V _{PS}	Pin ⑧	10	V
Output Current	I _o	Pin ①	−170	mA
Inhibit Input Voltage	V _I	Pin ⑤	−0.2 to V _{CC}	V
Power Dissipation	P _C	Ta ≤ 25°C	800/500	mW
Derating ratio	—	Ta > 25°C	7.0/4.4	mW/°C
Operating Temperature	Topr	—	−30 to +85	°C
Storage Temperature	Tstg	—	−55 to +150	°C
Output Current	I _{OS}	Pin ⑥ (on time)	5	mA
Output Applied Voltage	V _{OS}	Pin ⑥ (off time)	−0.2 to V _{CC}	V

Electrical Characteristics

(V_{CC}=5V, V_{PS}=5V, Ta=25°C)

Parameter		Symbol	Condition	Rating			Units
				MIN	TYP	MAX	
Operating Supply Voltage		V _{CC}	—	4.5	5.0	5.5	V
Circuit Current		I _{CC ON}	V _I = 5 V	—	3.8	6.8	mA
		I _{CC OFF}	V _I = 0 V	—	5.0	9.0	
Output Voltage		V _{O1}	I _o = −150mA	3.7	4.1	—	V
		V _{O2}	I _o = −100mA	3.8	4.2	—	
		V _{O3}	I _o = −20mA	3.9	4.3	—	
Output Voltage		V _{OS1}	I _{OS} = 0mA	—	0.05	—	V
		V _{OS2}	I _{OS} = 2mA	—	0.1	0.4	
Inhibit Input Voltage	High	V _{IH}	V _O , V _{OS} L→H	1.43	1.53	1.63	V
	Low	V _{IL}	V _O , V _{OS} H→L	1.23	1.33	1.43	
	Hysteresis	V _{IHY}	(V _{IH} − V _{IL})	—	200	—	
Inhibit Input Current		I _I	—	—	−0.3	−5	μA
Monitor Input Pin Voltage		V _M	In equilibrium operation	1.71	1.95	2.19	V
Monitor Input Pin Current		I _M	—	—	−0.3	−5	μA
Light Output Power Supply Deviation		ΔI _P /I _P ΔV _{CC}	V _{CC} = 5V ± 10%	—	0.2	—	%/V
Light Output Change Range		ΔI _P /I _P	T _a = −20 to +85°C	—	0.2	—	%

Common Data

Fig. 94-1 Optical Power Output Dependence of Far-Field Pattern

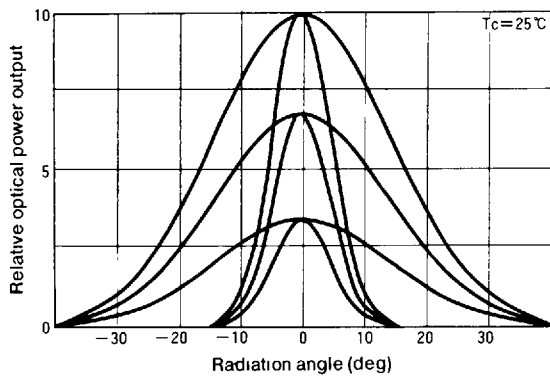


Fig. 94-2 Polarization Ratio vs. Optical Power Output (LT026 series, LT023 series)

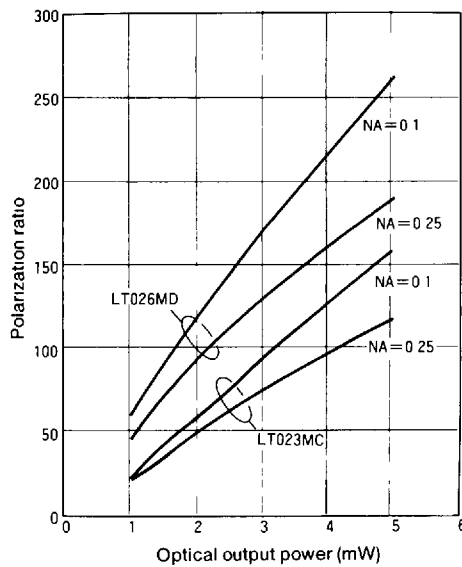


Fig. 94-3 Polarization Ratio vs. Optical Power Output (LT024 series, LT015 series)

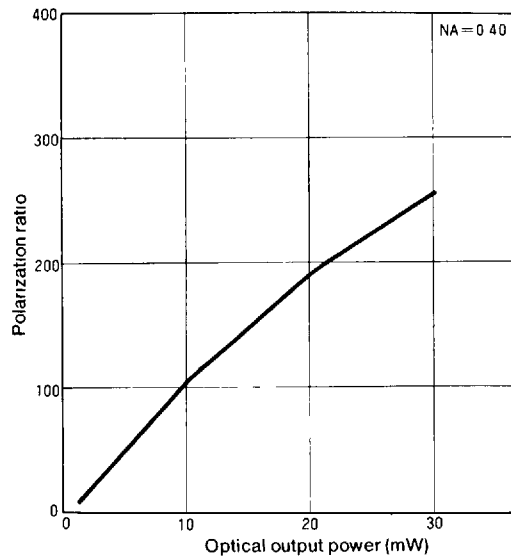


Fig. 94-4 Coupling Efficiency

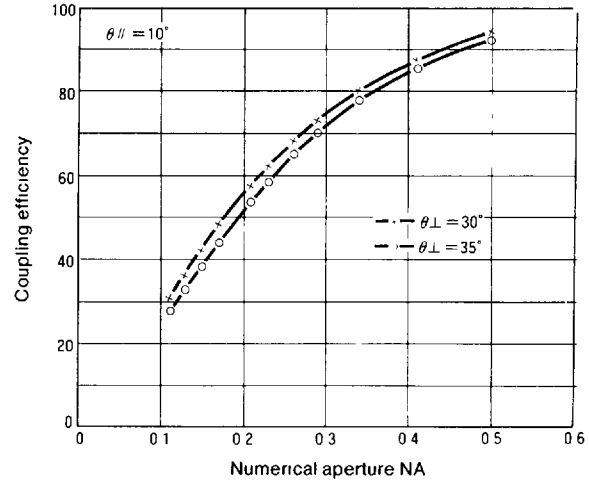
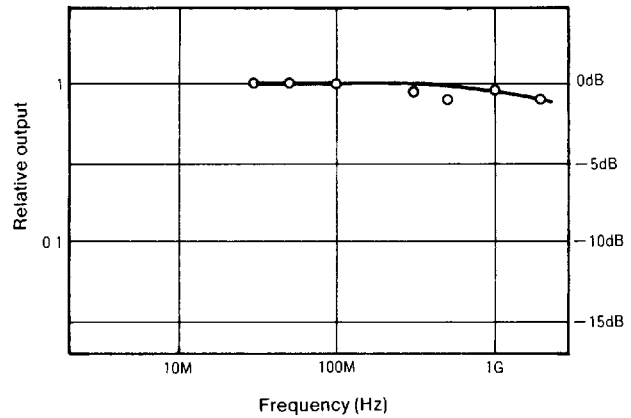


Fig. 94-5 Frequency Response



Note All data on this page is typical only, and is not intended as a specification. The shapes of these curves can be used as a general reference, but the actual characteristics will vary from device to device.

Built-in PIN Photodiode Characteristics

Fig. 95-1 Photodiode Frequency Response Characteristic

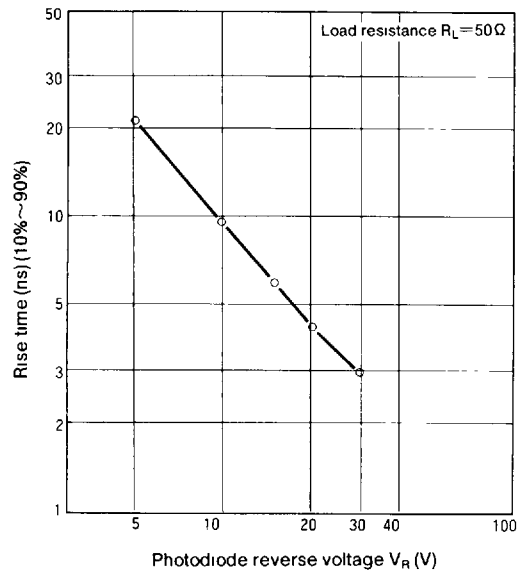
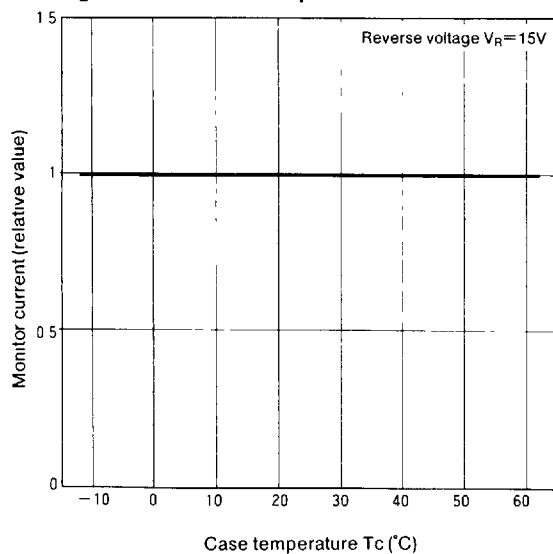


Fig. 95-2 Photodiode Temperature Characteristic



Note All data on this page is typical only, and is not intended as a specification. The shapes of these curves can be used as a general reference, but the actual characteristics will vary from device to device.

Unit: mm

Fig. 98-2 Low-Cap Type (D Type)

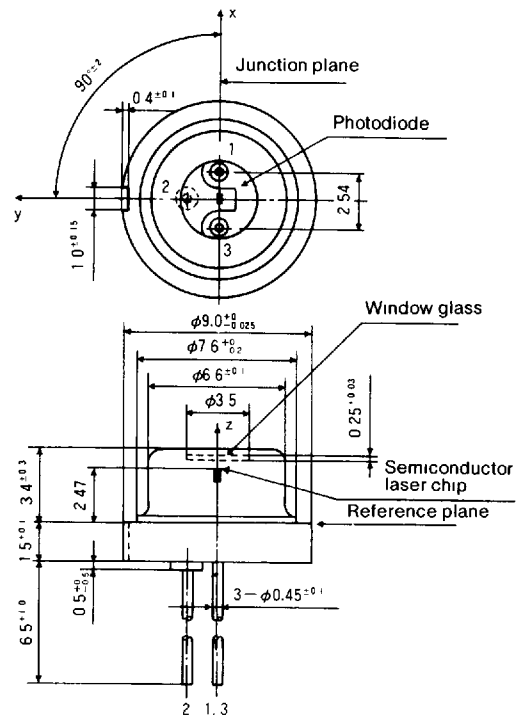


Fig. 98-4 Compact Package Type (S Type)

