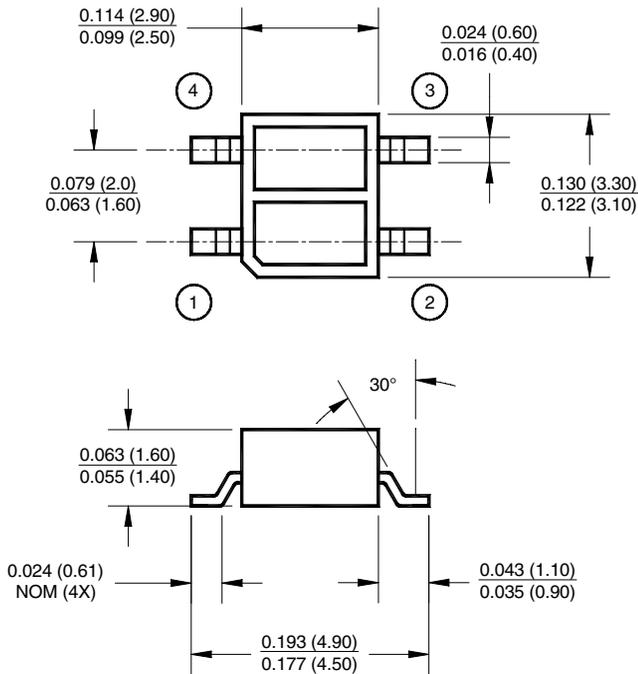


PACKAGE DIMENSIONS



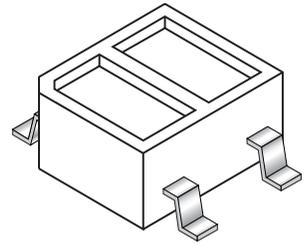
PIN 1 ANODE PIN 3 COLLECTOR
PIN 2 CATHODE PIN 4 EMITTER

NOTES:

1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of $\pm .010$ (.25) on all non-nominal dimensions

FEATURES

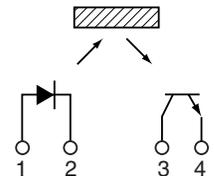
- Phototransistor output
- Tape and reel packaging
- No contact surface sensing
- Miniature package
- Lead form style: Gull Wing



NOTES

1. Derate power dissipation linearly 1.33 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6mm) from housing.
5. Pulse conditions: $t_p = 100 \mu s$; $T = 10 ms$.

SCHEMATIC



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-25 to +85	°C
Storage Temperature	T_{STG}	-30 to +100	°C
Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	°C
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	°C
EMITTER			
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Peak Forward Current ⁽⁵⁾	I_{FP}	1	mA
Power Dissipation ⁽¹⁾	P_D	75	mW
SENSOR			
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Power Dissipation ⁽¹⁾	P_D	50	mW

ELECTRICAL / OPTICAL CHARACTERISTICS (T _A = 25°C unless otherwise specified)						
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
INPUT DIODE						
Forward Voltage	I _F = 20 mA	V _F	—	1.2	1.6	V
Reverse Leakage Current	V _R = 5 V	I _R	—	—	10	μA
Peak Emission Wavelength	I _F = 20 mA	λ _{PE}	—	940	—	nm
OUTPUT TRANSISTOR						
Collector-Emitter Dark Current	V _{CE} = 20 V, I _F = 0 mA	I _D	—	—	100	nA
COUPLED						
On-State Collector Current	I _F = 20 mA, V _{CE} = 5 V	I _{C(ON)}	0.15	0.40	—	mA
Saturation Voltage		V _{CE(SAT)}	—	—	0.3	V
Rise Time	V _{CE} = 10 V, I _{C(ON)} = 5 mA, R _L = 100 Ω	t _r	—	30	—	μs
Fall Time		t _f	—	25	—	

Fig. 1 Normalized Collector Current vs. Distance between device and reflector

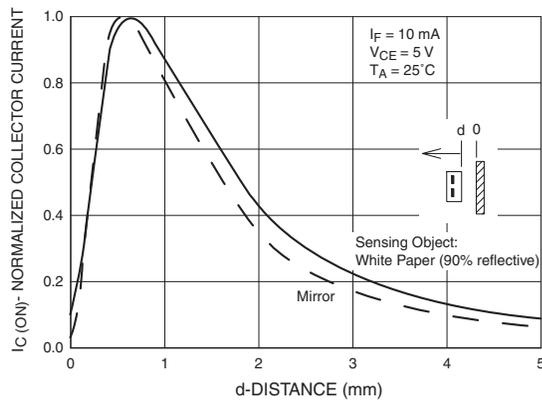


Fig. 2 Collector Current vs. Forward Current

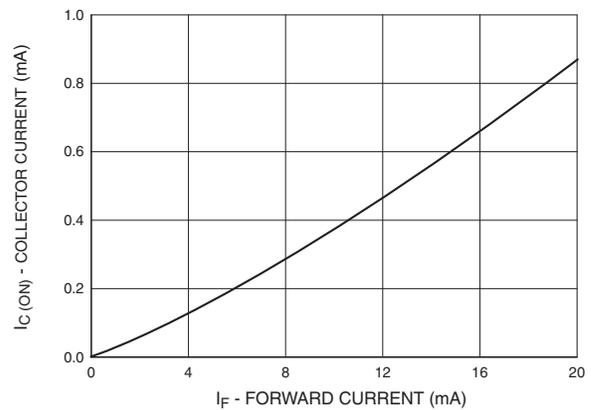


Fig. 3 Collector Current vs. Collector to Emitter Voltage

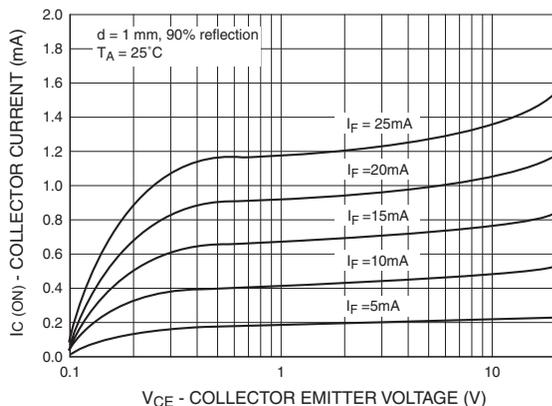


Fig. 4 Collector Emitter Dark Current (Normalized) vs. Ambient Temperature

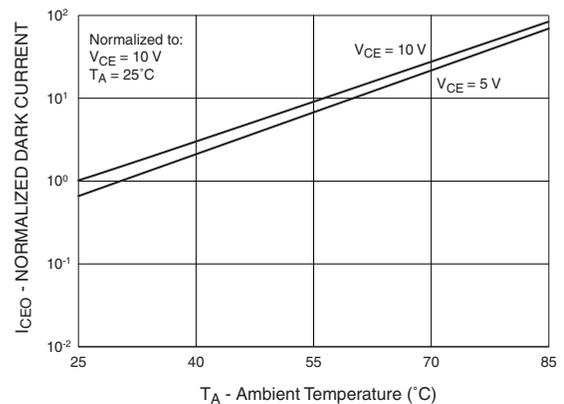


Fig. 5 Forward Current vs. Forward Voltage

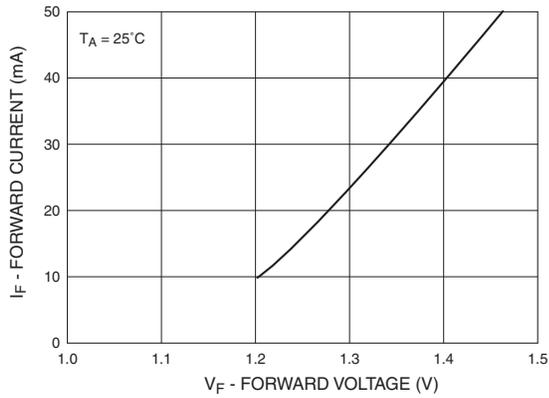


Fig. 6 Rise and Fall Time vs. Load Resistance

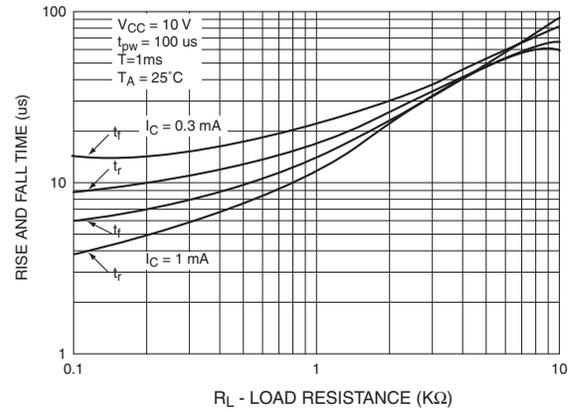
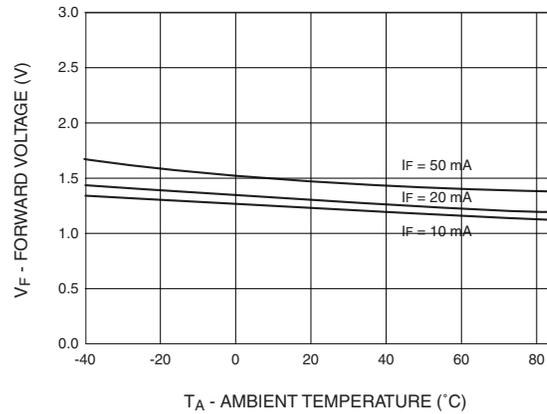


Fig. 7 Forward Voltage vs. Ambient Temperature



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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.