

DESCRIPTION

This is a Silicon NPN Opto-Electronic coupler designed for applications requiring low CTR gain at low operating currents and high voltage isolation.

ABSOLUTE MAXIMUM RATINGS

- ☐ Storage temperature..... -65°C to +125°C
- ☐ Operating temperature..... -55°C to +100°C
- ☐ Lead solder temperature..... 260°C, 10 seconds
- ☐ Input/Output Voltage..... 1,000 Volts

LIGHT EMITTING DIODE MAXIMUM RATINGS

- ☐ Reverse Voltage..... 2 Volts
- ☐ Forward Current 40 mA dc
- ☐ Pulsed Current 1 A (pk)
 (1.0 µs Pulse Width, 300 pps)

FEATURES

- ☐ Low CTR Gain, typically 50 % CTR
- ☐ High Isolation, 10^{11} Ohms minimum
- ☐ High Reliability
- ☐ Hermetic TO-5, 6-Lead Package
- ☐ Military level screened devices available

PHOTO TRANSISTOR MAXIMUM RATINGS

- ☐ Collector-Emitter Breakdown Voltage...40 V dc
- ☐ Collector-Base Breakdown Voltage.....45 V dc
- ☐ Emitter-Base Breakdown Voltage..... 7 V dc
- ☐ Power Dissipation.....300 mW
- ☐ Collector Current..... 50 mA

ELECTRO-OPTICAL CHARACTERISTICS (Case T = 25°C)

PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown	$I_C = 1 \text{ mA}$	V_{BRCEO}	40			Volts
Emitter - Base Breakdown	$I_E = 100 \text{ } \mu\text{A}$	V_{BRECO}	7			Volts
Collector - Base Breakdown	$I_C = 100 \text{ } \mu\text{A}$	$V_{BR CBO}$	45			Volts
Collector - Emitter Dark Current	$V_{CE} = 20\text{V}$	$I_{C(off)}$			100	nA
Collector - Base Dark Current	$V_{CB} = 20 \text{ V}$	$I_{CB (off)}$			10	nA
Collector-Emitter Saturation	$I_C = 0.5 \text{ mA}, I_f = 2 \text{ mA}$	$V_{CE(sat)}$			0.3	Volts
Response Time	$10\%-90\%, I_f = 5 \text{ mA}$ $V_{CE} = 10 \text{ V}, R_L = 100 \text{ } \Omega$	t_r			20	µsec
		t_f			20	µsec
Current Gain	$I_C = 10 \text{ mA}, V_{CE} = 5 \text{ V}$	H_{fe}	100			
Collector Current (On state)	$I_F = 1 \text{ mA}, V_{CE} = 5 \text{ V}$	$I_C (on)$	0.5			mA
Base Current (On state)	$I_F = 10 \text{ mA}, V_{CB} = 5 \text{ V}$	$I_{CB (on)}$	30			µA
Reverse Current (LED)	$V_R = 2 \text{ V}$	I_R			100	µA
Forward Voltage (LED)	$I_F = 10 \text{ mA}$	V_F	0.8		1.5	Volts
Capacitance	$V = 0 \text{ V}, f = 1 \text{ MHz}$	C_{IO}			5	pF