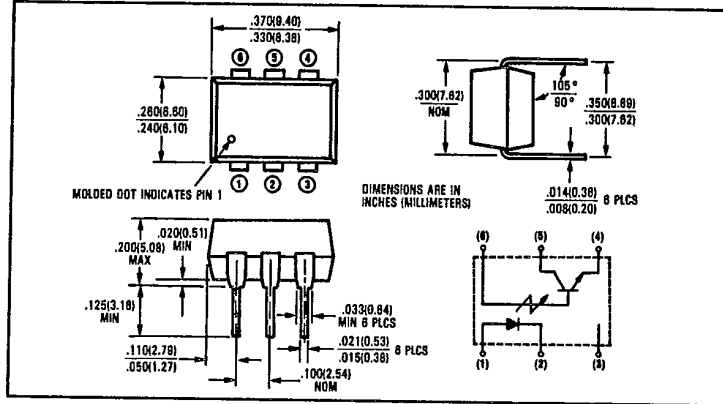
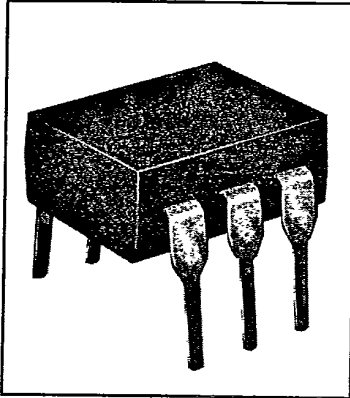


Optically Coupled Isolators

Type OPI2100



Features

- 4 kV isolation
- High current transfer ratio
- Direct interface with up to 10 TTL loads
- UL recognized File No. E58730

Description

The OPI2100 consists of a gallium arsenide infrared emitting diode and an NPN silicon phototransistor mounted in a standard plastic six pin dual-in-line package. This device is designed to directly drive from 1 to 10 TTL loads and has very good output sinking characteristics at low sink current.

Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

Input-to-Output Isolation Voltage.....	±4000 VDC ⁽¹⁾
Storage Temperature Range.....	-55°C to +150°C
Operating Temperature Range.....	-55°C to +100°C
Lead Soldering Temperature (1/16 inch [1.6 mm] from case for 5 sec. with soldering iron) ⁽²⁾	260°C

Input Diode

Forward DC Current.....	60 mA
Peak Forward Current (1 μs pulse, 300 pps).....	3.0 A
Reverse Voltage.....	6.0 V
Power Dissipation.....	100 mW ⁽³⁾

Output Transistor

Collector-Emitter Voltage.....	30 V
Collector-Base Voltage.....	30 V
Emitter-Collector Voltage.....	6.0 V
Power Dissipation.....	150 mW ⁽⁴⁾

Notes:

- (1) Measured with input diode leads shorted together and output leads shorted together.
- (2) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- (3) Derate linearly 1.33 mW/°C above 25°C.
- (4) Derate linearly 2.0 mW/°C above 25°C.

T-41-83

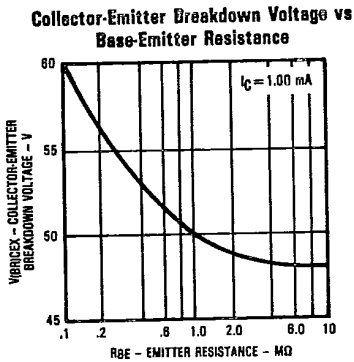
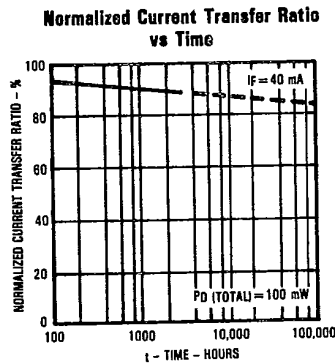
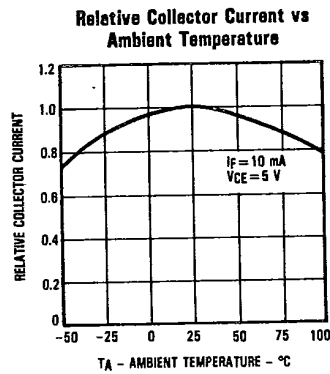
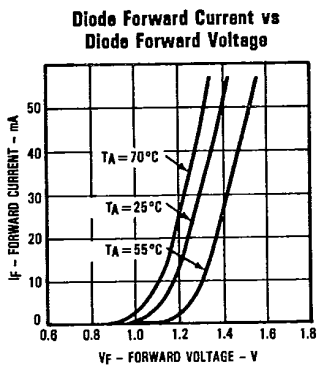
Type OPI2100

Electrical Characteristics (TA = 25°C unless otherwise noted)

Symbol	Parameter	Min.	Typ.	Max.	Units	Test Conditions
Input Diode						
V _F	Forward Voltage			1.40	V	I _F = 40 mA
I _R	Reverse Current			10.0	μA	V _R = 6.0 V
Output Phototransistor						
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	30			V	I _C = 1.00 mA
V _{(BR)ECO}	Emitter-Collector Breakdown Voltage	6.0			V	I _C = 100 μA
V _{(BR)CBO}	Collector-Base Breakdown Voltage	30			V	I _C = 10.0 μA
I _{CEO}	Collector-Emitter Dark Current			50	nA	V _{CE} = 5.0 V
h _{FE}	DC Current Gain		100			V _{CE} = 5.0 V, I _C = 10.0 mA
Coupled						
I _C /I _F	DC Current Transfer Ratio	150			%	V _{CE} = 5.0 V, I _F = 10.0 mA
I _C /I _F	DC Current Transfer Ratio	50			%	V _{CE} = .60 V, I _F = 3.2-32 mA
V _{CE(SAT)}	Saturation Voltage			0.60	V	I _C = 16.0 mA, I _F = 32 mA



Typical Performance Curves



TRW reserves the right to make changes at any time in order to improve design and to supply the best product possible. Plastic color may vary.
 Optoelectronics Division, TRW Electronic Components Group, 1215 W. Crosby Rd., Carrollton, TX 75006 (214) 323-2200, TLX 6716032 or 215849
 © TRW Inc. 1985. TRW is the name and mark of TRW Inc. Printed in U.S.A.