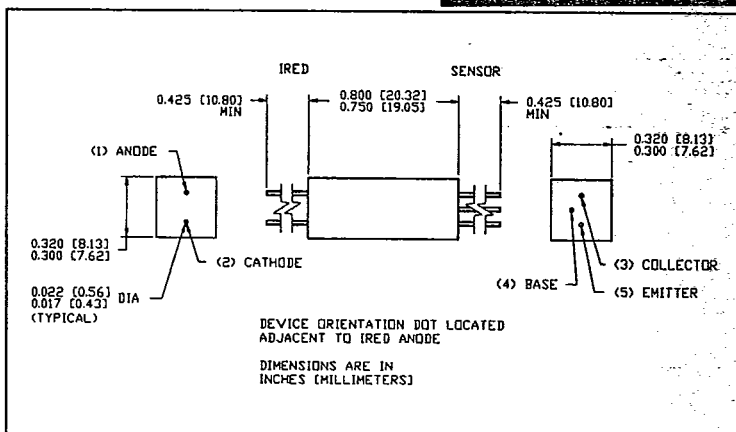
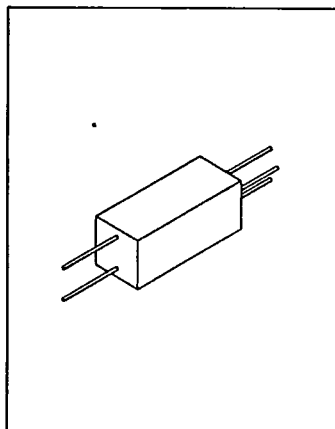


C-101 Series

Optically Coupled Isolators



F-41-83



Features

- 10KV I/O Isolation
- high current-transfer-ratio (CTR)
- hermetically-sealed components
- UL listed
- replaces CLA60 family of isolators

Description

The C-101 series of optically coupled isolators consists of a gallium arsenide infrared-emitting diode and a silicon npn phototransistor, coaxially mounted in an injection-molded, black plastic housing, sealed against all external sources of optical radiation. The series is designed for applications simultaneously requiring high voltage isolation and component hermeticity. Call Senisys for applications assistance.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise stated.)

Storage and Operating Temperature..... -55°C to $+100^\circ\text{C}$
 Lead Soldering Temperature⁽¹⁾..... $240^\circ\text{C}^{(2)}$

IRED

Continuous Forward Current..... 150mA
 Peak Forward Current (1 μs pulse width, 300pps)..... 3A
 Reverse Voltage..... 3V
 Power Dissipation..... 200mW⁽³⁾

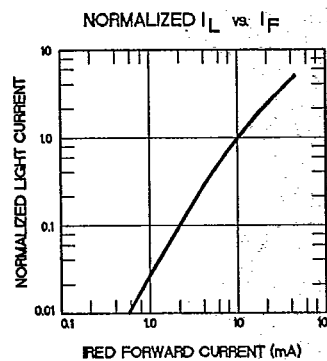
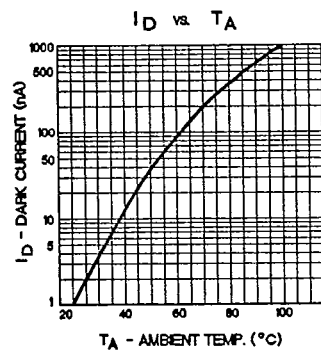
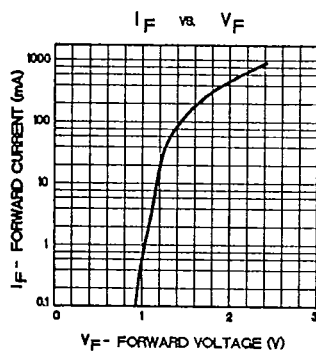
Sensor

Collector-Emitter Voltage..... 40V
 Emitter-Collector Voltage..... 6V
 Power Dissipation..... 250mW⁽³⁾

Notes:

1. 0.06" (1.5mm) from the case for 5 seconds maximum.
2. 260°C maximum when wave soldering.
3. Derate linearly from 25°C at $-2.00\text{ mW}/^\circ\text{C}$.

Fundamental Characteristics



Senisys • 1600 West Plano Parkway • Plano, Texas 75075 • Phone: 214-422-1844 • FAX: 214-423-4661

C-101 Series

FASCO INDS/ SENISYS

Optically Coupled Isolators**Electrical Characteristics** ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Symbol	Parameter	min	max	units	Test Conditions
Input Diode					
V_F	Forward Voltage	-	1.50	V	$I_F = 10\text{mA}$
I_R	Reverse Current	-	10	μA	$V_R = 3.0\text{V}$
Output Phototransistor					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30	-	V	$I_C = 1.0\mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.0	-	V	$I_E = 100\mu\text{A}$
I_D	Dark Current	-	50	nA	$V_{CE} = 10\text{V}$
Coupled					
$CTR^{(1)}$	DC Current-Transfer-Ratio				
	C-101-A ⁽²⁾	10	-	%	$I_F = 10\text{mA}, V_{CE} = 5\text{V}$
	C-101-B ⁽²⁾	20	70	%	$I_F = 10\text{mA}, V_{CE} = 5\text{V}$
	C-101-C ⁽²⁾	40	-	%	$I_F = 10\text{mA}, V_{CE} = 5\text{V}$
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	-	0.4	V	$I_F = 10\text{mA}, I_C = 0.8\text{mA}$
V_{ISO}	Isolation Voltage	10	-	KVDC	

Notes:

- Current-Transfer-Ratio is defined as the quotient of output current and input current; $CTR = I_{OUT}/I_{IN}$. Other ranges of current transfer ratio can be specified; call Senisys for applications assistance.
- The C-101 family replaces the CLA60 family of isolators previously manufactured by Clairex Electronics. Replacement is exact with identical or improved characteristics; use the following guide:

Previous Part Number

CLA60
CLA60AA
CLA60AB

Current Part Number

C-101-C
C-101-B
C-101-A

Typical Characteristics**SWITCHING TEST CIRCUIT**