

T-41-83

Transistor Output

CLA60
CLA60AA
CLA60AB

High Voltage
Axial Lead Isolators

GENERAL DESCRIPTION — The Clairex CLA60 series axial lead optoisolators are designed for applications requiring hermeticity and high voltage isolation. The CLA60 series have guaranteed minimum current transfer ratios and the phototransistor base lead is available for applications requiring it. The construction of the isolator provides a minimum of 5mm between the emitter case and detector case assuring a 10KV volt DC isolation. Emitter and detector components are hermetically sealed. Case material is Valox®.

ABSOLUTE MAXIMUM RATINGS

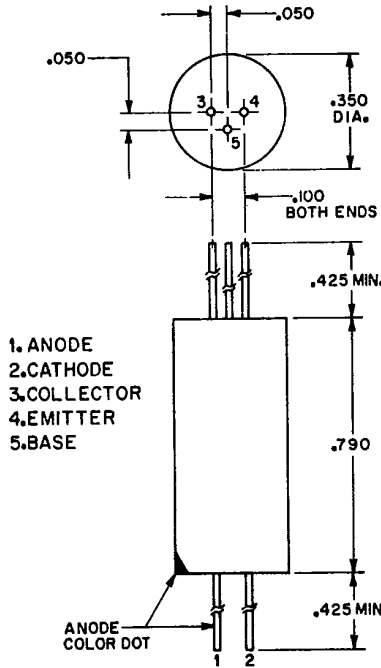
Maximum Storage and Operating Temperature — 40°C to 100°C

EMITTER

Power Dissipation
At 25°C ambient = 150mw
Continuous Forward Current = 40mA
Derate 2mw/°C

DETECTOR

Power Dissipation
At 25°C = 200mw
Derate 2mw/°C
Maximum Voltages
V_{CEO} = 40 volts V_{EEO} = 6 volts
Maximum Current = 100mA



- 1. ANODE
- 2. CATHODE
- 3. COLLECTOR
- 4. EMITTER
- 5. BASE

ANODE
COLOR DOT



U.L. RECOGNIZED COMPONENT

ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated)

Symbol	Characteristic	Test Conditions	CLA60		CLA60AA		CLA60AB		Units
			Min.	Max.	Min.	Max.	Min.	Max.	
Emitter VF VR	Forward Voltage	IF = 10 mA		1.5		1.5		1.5	Volts
	Reverse Voltage	IR = 10 μA	3		3		3		Volts
Sensor BV _{CEO} BV _{EEO}	Collector to Emitter Breakdown Voltage	I _{CEO} = 100 μA	55		55		40		Volts
	Emitter to Collector Breakdown Voltage	I _{EEO} = 100 μA	6		6		6		Volts
I ₀ (I _{CEO})	Leakage Current	IF = 0, V _{CE} = 10V		50		50		100	na
Coupled TR, IC/IF V _{CE} (SAT)	Isolation Voltage		10,000		10,000		10,000		DC Volts
	Transfer Ratio	V _{CE} = 10 V, IF = 10 mA	40		20		10		%
tr	Collector to Emitter Saturation Voltage	IF = 10 mA, I _{CE} = 1 mA		.5		.5		.5	Volts
	Rise Time	IF = 10 mA, I _{CE} = .25 mA							Volts
tf	Collector to Emitter Saturation Voltage	V _{CE} = 10 V, RL = 100 Ω							μSEC
	Fall Time	I _{CE} = 1 mA	6 TYP		6 TYP		6 TYP		μSEC
		V _{CE} = 10 V, RL = 100 Ω							μSEC
		I _{CE} = 1 mA	6 TYP		6 TYP		6 TYP		μSEC

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The Clairex series of axial opto-isolators provide the designer with an inexpensive means to transmit an analog or digital signal between two electrically isolated systems, while at the same time reducing common mode noise. Opto-isolators have found use in such applications as patient monitoring equipment, sensing circuits, and in various types of feed back circuitry.

TRANSISTOR OUTPUT SCHEMATIC

