

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

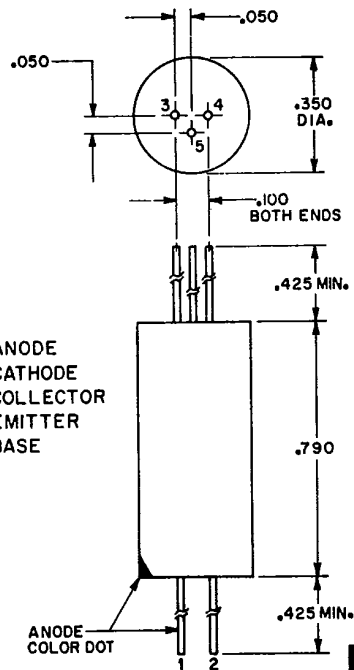
At 25°C = 200mw

Derate 2mw/°C

Maximum Voltages

$V_{CEO} = 40$ volts $V_{ECO} = 6$ volts

Maximum Current = 100mA



U.L. RECOGNIZED COMPONENT

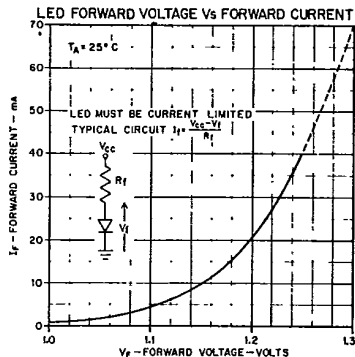
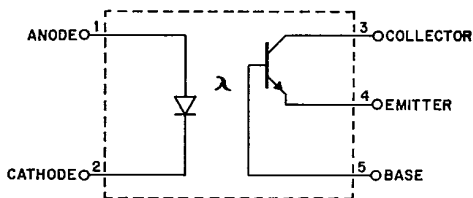
ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated)

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

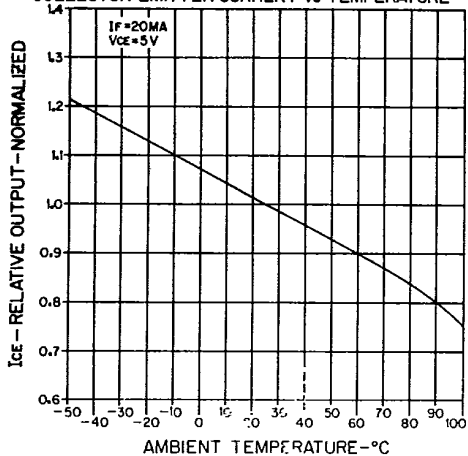
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The Clairex series of axial opto-isolators provide the designer with an inexpensive means to transmit an analog of digital signal between two electrically isolated systems, while at the same time reducing common mode noise. Opto-isolators have found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

TRANSISTOR OUTPUT SCHEMATIC



COLLECTOR EMITTER CURRENT vs TEMPERATURE



OUTPUT CURRENT - I_C vs INPUT CURRENT

