



LOW INPUT CURRENT PHOTODARLINGTON OPTICALLY COUPLED ISOLATOR

APPROVALS

- UL recognised, File No. E91231

DESCRIPTION

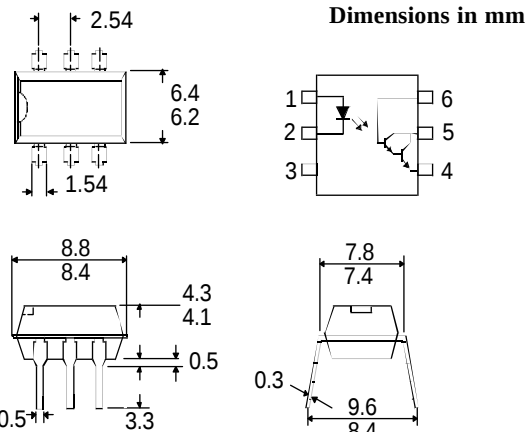
The 4N32-19 optically coupled isolator consists of an infrared light emitting diode and NPN silicon photodarlington in a space efficient dual in line plastic package.

FEATURES

- Options :-
10mm lead spread - add G after part no.
Surface mount - add SM after part no.
Tape&reel - add SMT&R after part no.
- High Current Transfer Ratio (500% min)
- High Isolation Voltage ($5.3\text{kV}_{\text{RMS}}$, 7.5kV_{PK})
- High BV_{CEO} (60V min)
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

- Computer terminals
- Industrial systems controllers
- Measuring instruments
- Signal transmission between systems of different potentials and impedances



ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature _____ -55°C to + 150°C
Operating Temperature _____ -55°C to + 100°C
Lead Soldering Temperature
(1/16 inch (1.6mm) from case for 10 secs) 260°C

INPUT DIODE

Forward Current _____ 80mA
Reverse Voltage _____ 5V
Power Dissipation _____ 105mW

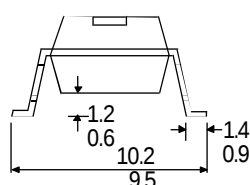
OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} _____ 55V
Emitter-collector Voltage BV_{ECO} _____ 6V
Power Dissipation _____ 150mW

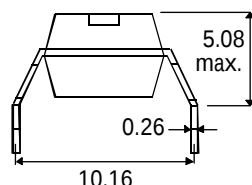
POWER DISSIPATION

Total Power Dissipation _____ 250mW
(derate linearly 3.3mW/°C above 25°C)

OPTIONSM SURFACEMOUNT



OPTIONG



ISOCOM COMPONENTS LTD

Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, Cleveland, TS25 1YD
Tel: (01429) 863609 Fax: (01429) 863581

ISOCOM INC

720 E., Park Boulevard, Suite 104,
Plano, TX 75074 USA
Tel: (972) 423-5521
Fax: (972) 422-4549

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.5	V	$I_F = 10\text{mA}$
	Reverse Voltage (V_R)	3			V	$I_R = 10\mu\text{A}$
	Reverse Current (I_R)			10	μA	$V_R = 3\text{V}$
Output	Collector-emitter Breakdown (BV_{CEO})	60			V	$I_C = 1\text{mA}$
	Collector-base Breakdown (BV_{CBO})	60			V	$I_C = 100\mu\text{A}$
	Emitter-collector Breakdown (BV_{ECO})	5			V	$I_E = 100\mu\text{A}$
	Collector-emitter Dark Current (I_{CEO})			100	nA	$V_{CE} = 10\text{V}$
Coupled	Collector Current (I_C)	50			mA	$10\text{mA } I_F, 10\text{V } V_{CE}$
	Collector-emitter Saturation Voltage			1.0	V	$8\text{mA } I_F, 2\text{mA } I_C$
	Input to Output Isolation Voltage V_{ISO}	5300			V_{RMS}	(note 1)
		7500			V_{PK}	(note 1)
	Input-output Isolation Resistance R_{ISO}	5×10^{10}			Ω	$V_{IO} = 500\text{V}$ (note 1)
	Output Rise Time t_r			5	μs	$V_{CC} = 10\text{V},$
	Output Fall Time t_f			100	μs	$I_F = 200\text{mA},$ $I_C = 50\text{mA}$

Note 1 Measured with input leads shorted together and output leads shorted together.