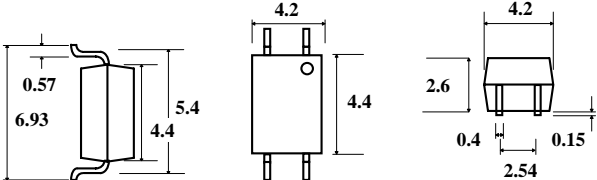



IS355 DARLINGTON MINI FLAT PACK OPTOCOUPPLERS

ISOCOM[®] LTD

PACKAGES	CIRCUIT
	

DESCRIPTION

The IS355 is a single channel device suitable for use in industrial robots, facsimiles and copiers. The device incorporates an infra red LED and a Darlington phototransistor detector in a 4 pin mini flat package.

Isocom Ltd supplies a multitude of plastic optocouplers for all applications varying from standard transistor optos through to Darlington and Schmitt Trigger devices. It's massive family of optos vary in speed allowing maximum opportunity to engineers worldwide.

All devices are performance guaranteed between -20°C and +80°C and have completed rigorous testing. The Company's customers can be assured of our commitment to stringent quality, reliability and inspection standards, as demonstrated by our existing approvals. Other customer specific options can also be offered.

FEATURES

- 3750V Isolation
- High Current Transfer Ratio (CTR min 600% @ $I_F=1\text{mA}$, $V_{CE}=2\text{V}$)
- Subminiature Type

Isocom Ltd reserves the right to change the details on this specification without notice. Please consult Isocom Ltd prior to use.

Isocom Ltd cannot accept liability for any errors or omissions.

For sales enquiries, or further information, please contact our sales office at:

Isocom Ltd, Hutton Close, Crowther Industrial Estate, District 3, Washington, NE38 0AH

Tel: +44 0191 4166 546 Fax: +44 0191 4155 055 Email Isocom@isocomptocouplers.com

Or go to the Isocom Website @: [Http://www.isocom.uk.com](http://www.isocom.uk.com)

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-40°C to +125°C
Operating Temperature	-30°C to +100°C
Input-to-Output Isolation Voltage	3750VDC

Input Diode

Forward DC Current	50mA	
Peak forward Current	1.0A	
Reverse Voltage	6.0V	
Power Dissipation	70mW	

Output Transistor

Collector-Emitter Voltage	30V	BV_{CEO}
Emitter-Collector voltage	5V	BV_{ECO}
Collector-Current	150mA	I_C
CollectorPower Dissipation	150mW	P_C

Package

Total Power Dissipation	170mW	P_{tot}
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ELECTRICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ U.O.S. (each channel where appropriate).

Input Diode Electrical Characteristics

Parameter	Symbol	Test Conditions	Device	Min	Typ	Max	Units
Forward Voltage	V_F	$I_F = \pm 20\text{mA}$			1.2	1.4	V
Peak Forward Voltage	V_{FM}	$I_{FM} = 0.5\text{A}$				3.5	V
Reverse Current	I_R	$V_R = 4\text{V}$				10	μA

Output Detector Electrical Characteristics

Terminal Capacitance	C_t	$V = 0, f = 1\text{KHz}$			30	250	pF
Collector-emitter Dark Current	I_{CEO}	$V_{CE} = 10\text{V}, I_F = 0$				1.0	μA

Coupled Electrical Characteristics

Current Transfer ratio	CTR	$I_F = \pm 1\text{mA}, V_{CE} = 2\text{V}$		600	1600	7500	%
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_F = \pm 20\text{mA}, I_C = 1\text{mA}$				1.0	V
Isolation Resistance	R_{ISO}	DC= 500V		5×10^{10}			Ω
Floating Capacitance	C_f	$V = 0, f = 1\text{Mhz}$			0.6	1.0	pF
Cut-off Frequency	f_c	$V_{CC} = 5\text{V}, I_C = 2\text{mA}, R_L = 100\Omega$			7.0		Khz
Response time (Rise)	t_r	$V_{CC} = 2\text{V}, I_C = 2\text{mA}, R_L = 100\Omega$			60	300	μS
Response time (Fall)	t_f				53	250	μS
Input-to-Output Isolation				3750			V

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