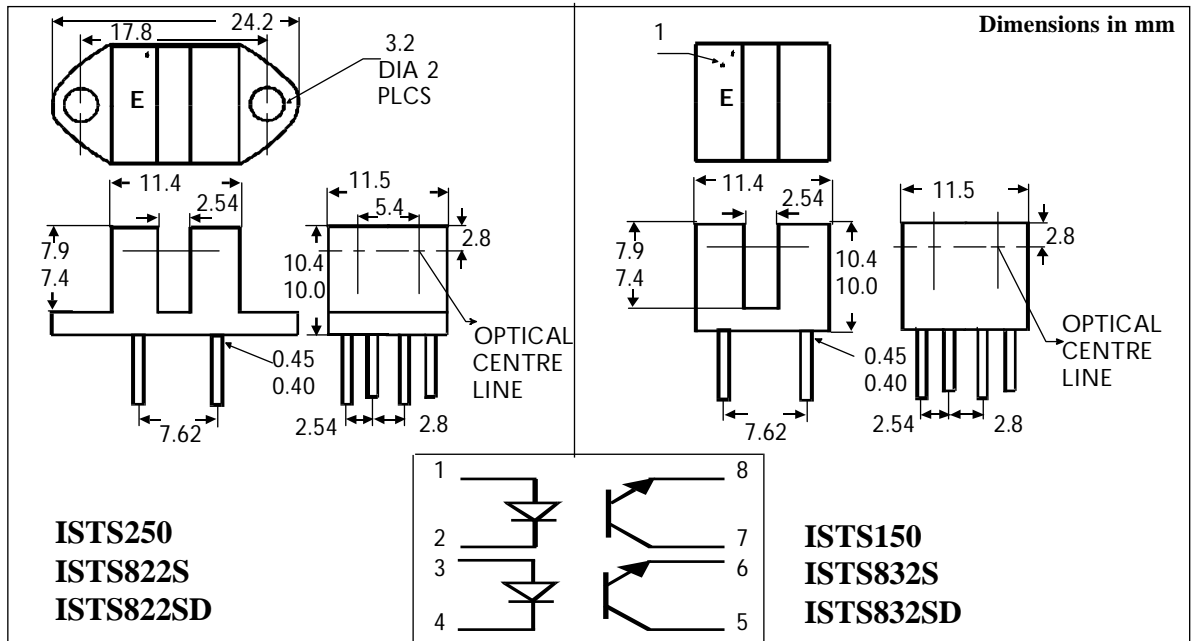


ISTS150, ISTS832S, ISTS832SD
ISTS250, ISTS822S, ISTS822SD



**TRANSMISSIVE OPTO-ELECTRONIC DUAL
CHANNEL SLOTTED INTERRUPTER
SWITCHES WITH TRANSISTOR SENSORS**



**ISTS250
ISTS822S
ISTS822SD**

**ISTS150
ISTS832S
ISTS832SD**

DESCRIPTION

This series of photointerrupters are dual channel switches consisting of two Gallium Arsenide infrared emitting diodes and two NPN silicon photo transistors mounted in a "side by side" configuration on opposite sides of a 2.5mm wide slot. Dual channels enable direction of travel sensing. The transmissive housing reduces possible interference from ambient light and provides dust and dirt protection. In addition the ISTS822S, ISTS832S have 0.25mm apertures in front of the phototransistors, While the ISTS822SD, ISTS832SD have the same sized apertures in front of both emitters and phototransistors

**ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)**

Storage Temperature	-40°C to + 85°C
Operating Temperature	-25°C to + 85°C
Lead Soldering Temperature (1/16 inch (1.6mm) from case for 10 secs)	260°C

FEATURES

- Single or Double apertures for High Resolution
- 2.5mm Gap between LED and Detector
- Dual channels "side by side"

INPUT DIODE

Forward Current	50mA
Reverse Voltage	5V
Power Dissipation	75mW

APPLICATIONS

- Copiers, Printers, Facsimilies, Record Players, Cassette Decks, VCR's

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	30V
Emitter-collector Voltage BV_{ECO}	5V
Collector Current I_C	20mA
Power Dissipation	75mW

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

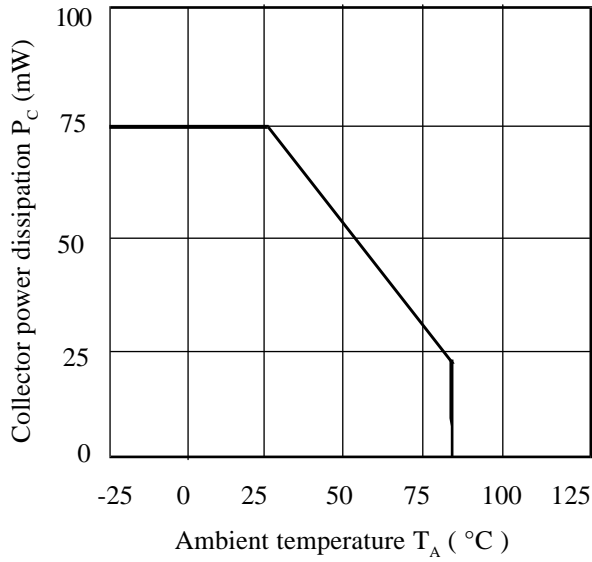
ISOCOM INC
720 E., Park Boulevard, Suite 104,
Plano, TX 75074 USA
Tel: (972) 423-5521
Fax: (972) 422-4549

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

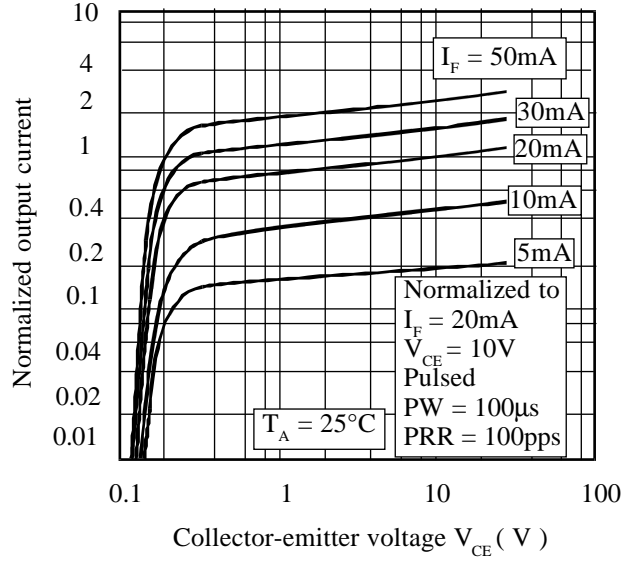
PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F) Reverse Voltage (V_R) Reverse Current (I_R)	3	1.2	1.6 10	V V μA	$I_F = 20\text{mA}$ $I_R = 10\mu\text{A}$ $V_R = 3\text{V}$
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 1) Emitter-collector Breakdown (BV_{ECO}) Collector-emitter Dark Current (I_{CEO})	30 5			V V nA	$I_C = 1\text{mA}$ $I_E = 100\mu\text{A}$ $V_{CE} = 10\text{V}$
Coupled	On-State Collector Current $I_{C(ON)}$ (Note 1) ISTS150, ISTS250 (no apertures) ISTS822S, ISTS832S (0.25mm apertures phototransistors only) ISTS822SD, ISTS832SD (0.25mm apertures in front of both - - emitters and phototransistors) Collector-emitter Saturation Voltage $V_{CE(SAT)}$ ISTS150, ISTS250 ISTS822S, ISTS832S ISTS822SD, ISTS832SD Rise Time tr Fall Time tf	250 250 100			μA μA μA V V V μs μs	$20\text{mA } I_F, 10\text{V } V_{CE}$ $20\text{mA } I_F, 10\text{V } V_{CE}$ $20\text{mA } I_F, 10\text{V } V_{CE}$ $20\text{mA } I_F, 125\mu\text{A } I_C$ $20\text{mA } I_F, 125\mu\text{A } I_C$ $20\text{mA } I_F, 50\mu\text{A } I_C$ $V_{CC} = 5\text{V},$ $I_F = 20\text{mA}, R_L = 100\Omega$

Note 1 Special Selections are available on request. Please consult the factory.

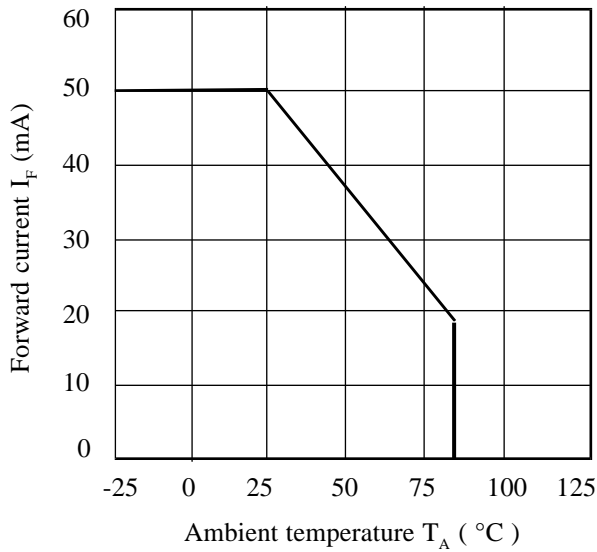
Collector Power Dissipation vs. Ambient Temperature



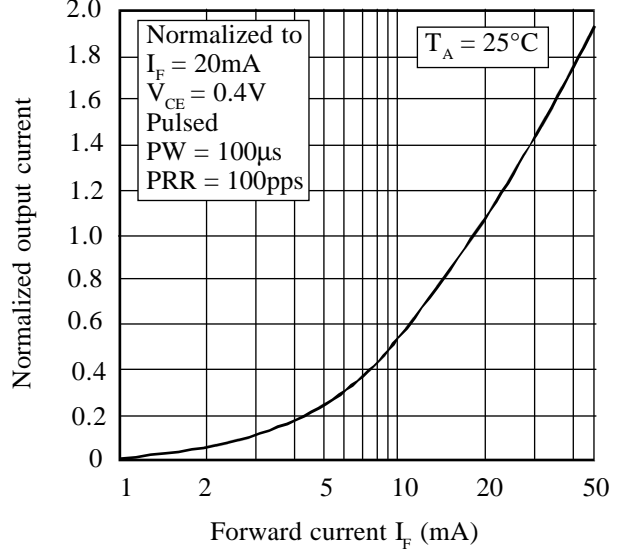
Normalized Output Current vs. Collector-emitter Voltage



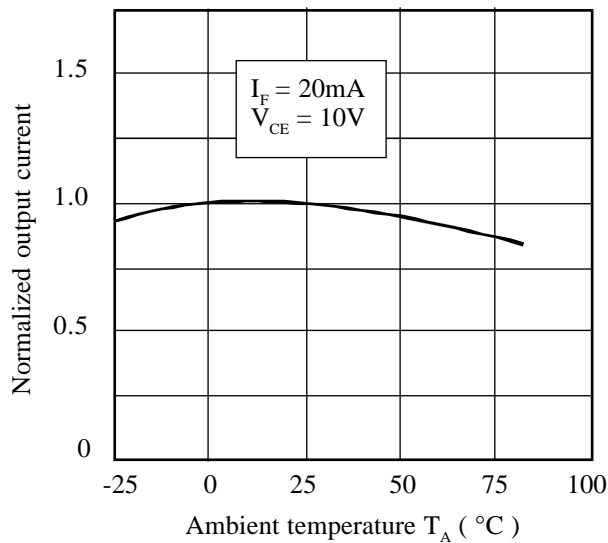
Forward Current vs. Ambient Temperature



Normalized Output Current vs. Forward Current



Normalized Output Current vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature

