

**HIGH DENSITY MOUNTING  
 PHOTOTRANSISTOR  
 OPTICALLY COUPLED ISOLATORS**



**APPROVALS**

- UL recognised, File No. E91231
- 'X' SPECIFICATION APPROVALS
  - VDE 0884 in 3 available lead form :-
    - STD
    - G form
    - SMD approved to CECC 00802
  - BSI approved - Certificate No. 8001

**DESCRIPTION**

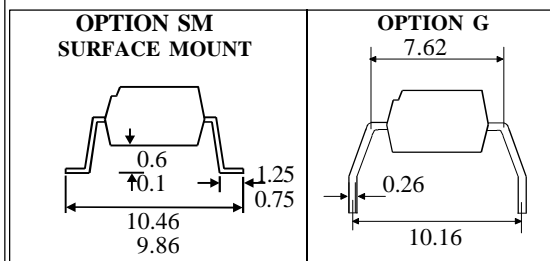
The TLP521, TLP521-2, TLP521-4 series of optically coupled isolators consist of infrared light emitting diodes and NPN silicon photo transistors in space efficient dual in line plastic packages.

**FEATURES**

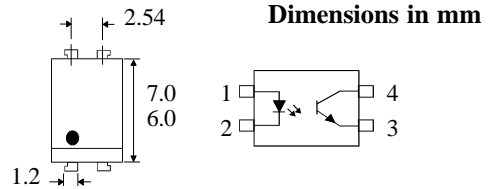
- Options :-
  - 10mm lead spread - add G after part no.
  - Surface mount - add SM after part no.
  - Tape&reel - add SMT&R after part no.
- High Current Transfer Ratio ( 50% min)
- High Isolation Voltage (5.3kV<sub>RMS</sub>, 7.5kV<sub>PK</sub>)
- High BV<sub>CEO</sub> ( 55Vmin )
- All electrical parameters 100% tested
- Custom electrical selections available

**APPLICATIONS**

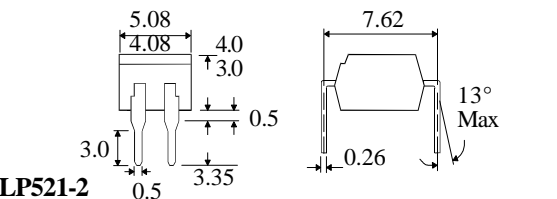
- Computer terminals
- Industrial systems controllers
- Measuring instruments
- Signal transmission between systems of different potentials and impedances



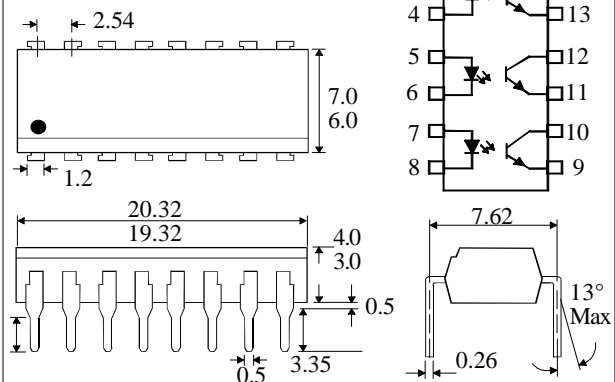
**TLP521**



**TLP521-2**



**TLP521-4**



**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

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

Storage Temperature	-55°C to + 125°C
Operating Temperature	-30°C to +100°C
Lead Soldering Temperature (1/16 inch (1.6mm) from case for 10 secs)	260°C

**INPUT DIODE**

Forward Current	50mA
Reverse Voltage	6V
Power Dissipation	70mW

**OUTPUT TRANSISTOR**

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

**POWER DISSIPATION**

Total Power Dissipation	200mW
(derate linearly 2.67mW/°C above 25°C)	

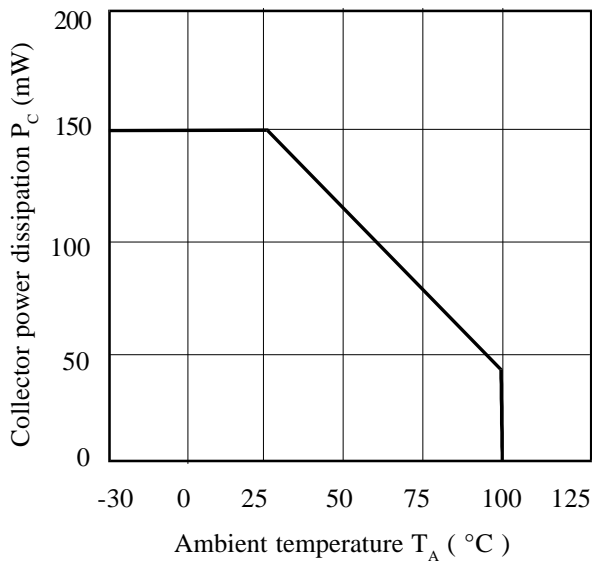
**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage ( $V_F$ )	1.0	1.15	1.3	V	$I_F = 10\text{mA}$
	Reverse Current ( $I_R$ )			10	$\mu\text{A}$	$V_R = 4\text{V}$
Output	Collector-emitter Breakdown ( $BV_{CEO}$ ) ( Note 2 )	55			V	$I_C = 0.5\text{mA}$
	Emitter-collector Breakdown ( $BV_{ECO}$ )	6			V	$I_E = 100\mu\text{A}$
	Collector-emitter Dark Current ( $I_{CEO}$ )			100	nA	$V_{CE} = 20\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2) TLP521, TLP521-2, TLP521-4	50		600	%	$5\text{mA } I_F, 5\text{V } V_{CE}$
	CTR selection available BL	200		600	%	
	GB	100		600	%	
	GB	30			%	$1\text{mA } I_F, 0.4\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$ -GB			0.4	V	$8\text{mA } I_F, 2.4\text{mA } I_C$
				0.4	V	$1\text{mA } I_F, 0.2\text{mA } I_C$
	Input to Output Isolation Voltage $V_{ISO}$	5300 7500			$V_{RMS}$ $V_{PK}$	See note 1 See note 1
	Input-output Isolation Resistance $R_{ISO}$	$5 \times 10^{10}$			$\Omega$	$V_{IO} = 500\text{V}$ (note 1)
Response Time (Rise), tr		4		$\mu\text{s}$	$V_{CE} = 2\text{V}$ ,	
Response Time (Fall), tf		3		$\mu\text{s}$	$I_C = 2\text{mA}, R_L = 100\Omega$	

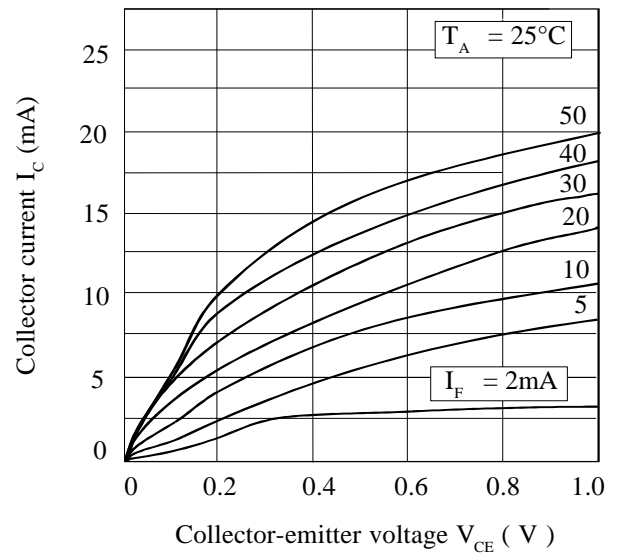
Note 1 Measured with input leads shorted together and output leads shorted together.

Note 2 Special Selections are available on request. Please consult the factory.

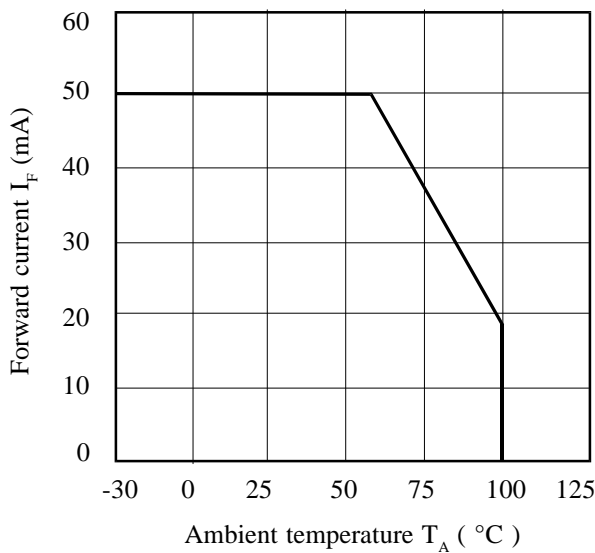
**Collector Power Dissipation vs. Ambient Temperature**



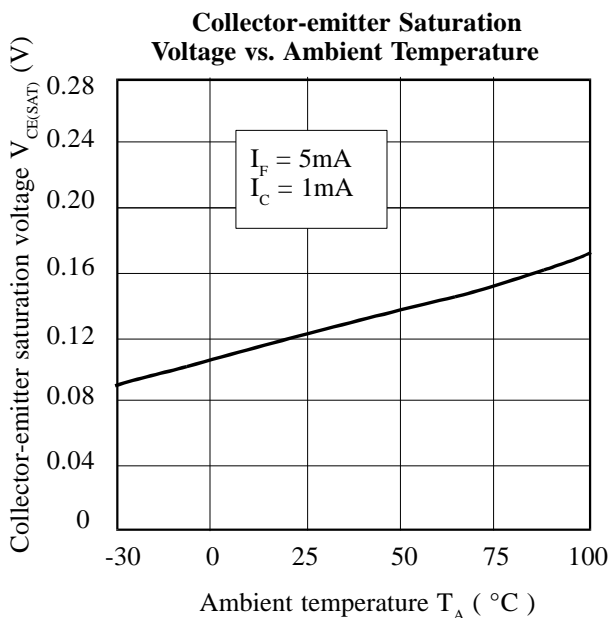
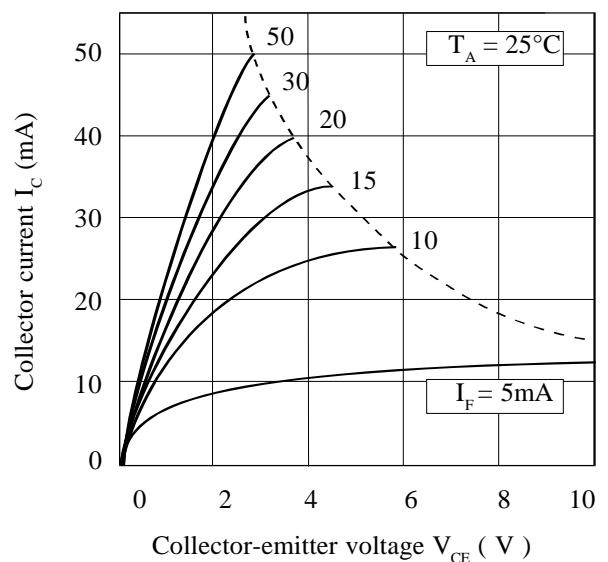
**Collector Current vs. Low Collector-emitter Voltage**



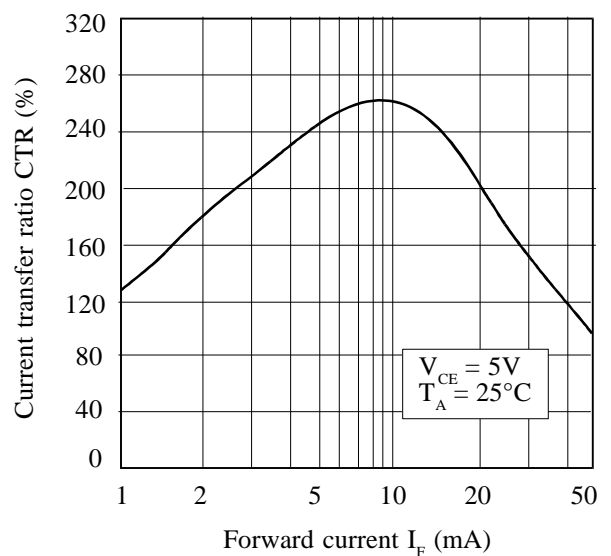
**Forward Current vs. Ambient Temperature**



**Collector Current vs. Collector-emitter Voltage**



**Current Transfer Ratio vs. Forward Current**



## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [isocom](#) manufacturer:*

Other Similar products are found below :

[SFH615A-2SM](#) [H11A1](#) [MOC3021M](#) [ISD74X](#) [IS60SM](#) [ICPL4503SM](#) [PS2505-4](#) [MOCD207](#) [IS60SMT&R](#) [MOC3083](#) [MOC3043X](#)  
[MOC3081M](#) [ICPL2531SM](#) [PS2502-2](#) [IS341W](#) [MOC3043M](#) [PS2502-2SM](#) [ILQ74X](#) [ICPL2601](#) [IS181C](#) [PS2502-4SM](#) [ICPL2530SM](#)  
[MOC3021XSM](#) [MOC3041SM](#) [SFH617A-4X](#) [ISQ74X](#) [CNY17-2XSM](#) [CNY17-1XSM](#) [MOC3023M](#) [H11AA1XSM](#) [ISQ2X](#) [PS2505-4SM](#)  
[TIL199](#) [4N32FSM](#) [MOC3020X](#) [H21A3](#) [IS281C](#) [MOC3061X](#) [ISP817B](#) [MOC3041M](#) [ILQ1XSM](#) [4N25X](#) [MOC3022X](#) [MOC3021X](#) [CNY17-3X](#) [ISP521-1XSM](#) [ISP06SM](#) [PS2805-1](#) [TLP321-4XGB](#) [ICPL2631](#)