

General Description

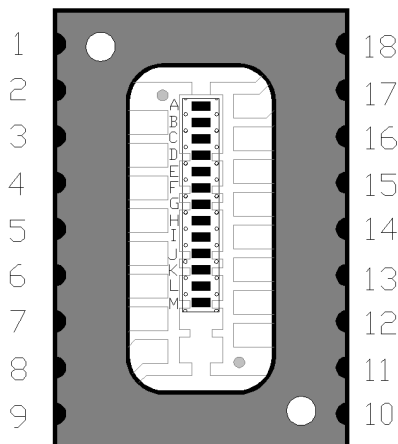
OIT18C consists in a silicon phototransistor's monolithic array of 13 elements. The phototransistors have a common collector on the back substrate, which is tied to two pads and every emitter is accessible to specific pad. The optical pitch of the array is 0.45 mm, the LCC package electrical pitch is 1.27 mm. The active area of each element is 0.25 x 0.50 mm².

The advantages of this product are the high uniformity of the silicon sensors, due to the monolithic construction and to the extremely controlled microelectronic process, the high stability of the signal and the high optical responsivity, due to the antireflective coating deposited on the phototransistor's areas.

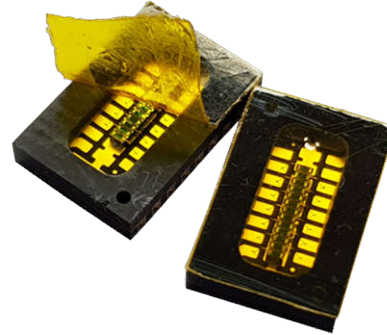
The device is protected with a thin plastic film, that is resistant to reflow oven processes. The film has to be removed once the device has been assembled on the electronic board and the user can attach the optical reticle. Two reference marks are available for the precise positioning of the reticle.

Applications

Optical encoders
 13 bit absolute encoders
 Optical Receivers
 Controls/drives
 Light sensors



TOP VIEW



Features

- Resistant to soldering processes, MSL2
- High uniformity of silicon cells (< 10%)
- Monolithic construction
- Low optical pitch (0.45mm)
- High temperature range
- Reference holes on the package for precise mounting
- Reference dots on the package for high accuracy mounting
- Reticle assembly service available

Pin Functions

No.	Name	Function
1	CC	Common collector
2	BE	Phototransistor B Emitter
3	DE	Phototransistor D Emitter
4	FE	Phototransistor F Emitter
5	HE	Phototransistor H Emitter
6	JE	Phototransistor J Emitter
7	LE	Phototransistor L Emitter
8	N.C.	Not connected
9	N.C.	Not connected
10	CC	Common collector
11	N.C.	Not connected
12	ME	Phototransistor M Emitter
13	KE	Phototransistor K Emitter
14	IE	Phototransistor I Emitter
15	GE	Phototransistor G Emitter
16	EE	Phototransistor E Emitter
17	CE	Phototransistor C Emitter
18	AE	Phototransistor A Emitter

Ordering Information

OIT18C-NR 13-ch. phototransistor array 0.45mm optical pitch on plastic SMD package, no encapsulant

PACKAGE CHARACTERISTICS

Symbol	Parameter	Value	Unit
S _F	Pad Surface Finishing	GOLD	
S _L	Pad Shelf Life	6	months
MSL	Moisture Sensitive Level ‡ (see note at bottom page)	2	Level

TYPICAL PERFORMANCE CURVES

Figure 1 – Output voltage Vs Temperature

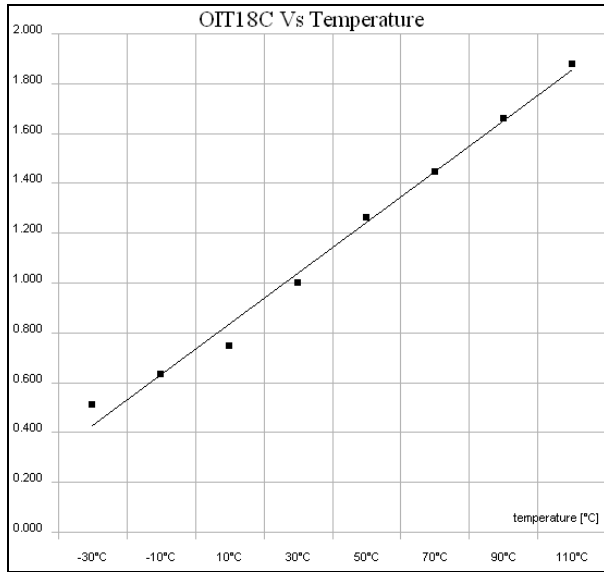
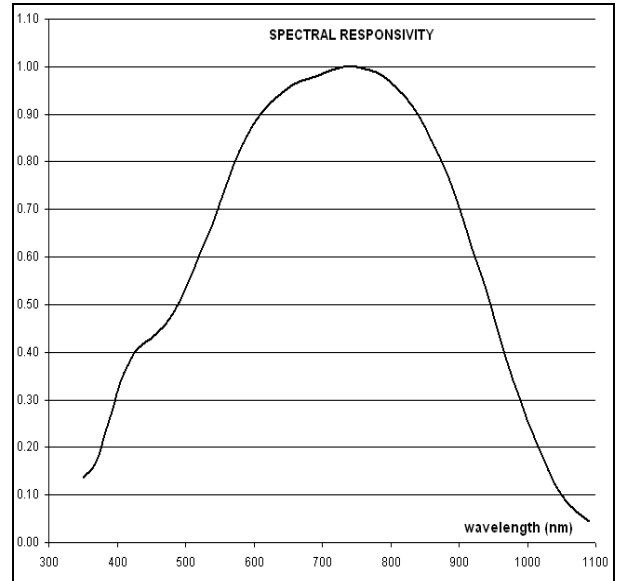


Figure 2 – Normalized spectral responsivity



‡ According to Jedec standard J-STD-020D.1