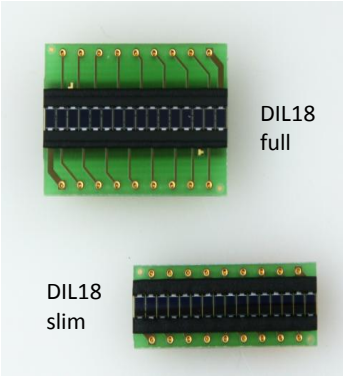
First Sensor

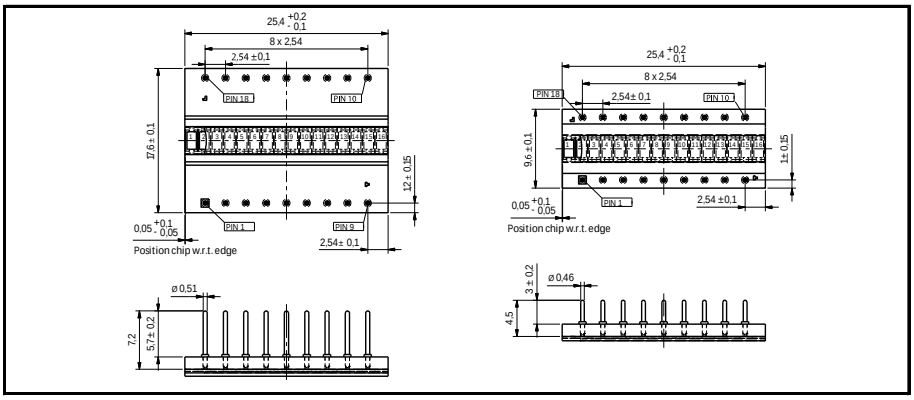
First Sensor PIN Array Data Sheet

Part Description 16XA2.6-A THD

Order # 50146201; 50146202

Preliminary version 07-12-11





Features

- 16 element PIN array
- High QE in the visible spectrum
- High uniformity, low cross talk
- Designed for linear multi-device assembly

Description

Linear PIN array optimized for CsI:Tl scintillator luminescence detection. Two DIL18 packages with epoxy potting available. Scintillator version available on special request.

Application

- X-ray inspection
- Photometry

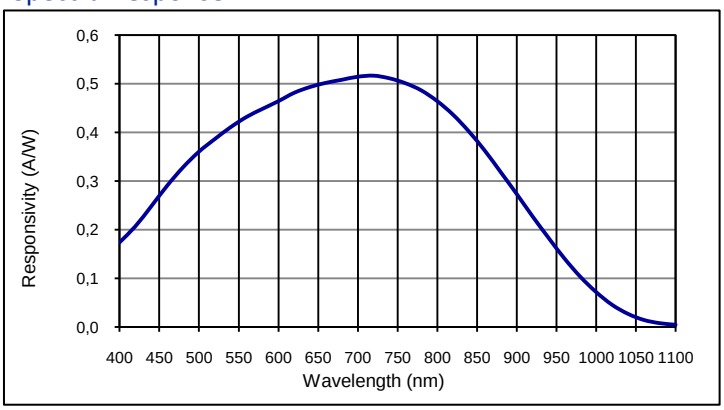
RoHS

2002/95/EC

Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-20	80	°C
T_{OP}	Operating temp	-10	60	°C
$V_{R(OP)}$	Operating voltage	-	20	V
I_{PEAK}	Peak DC current		10	mA

Spectral response



Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	No of elements			16		
	Active area			1200 x 2150		µm
	Gap; Pitch			375; 1575		µm
I_D	Dark current	U_R = 10 mV; per element		5	30	pA
		U_R = 1 V; per element			100	pA
C	Capacitance	U_R = 0V; per element		135	200	pF
		U_R = 5 V; per element		50		
	Responsivity	U_R = 5 V; λ = 550 nm		0.4		A/W
t_R	Rise time	U_R = 5 V; λ = 550 nm; R_L = 50 Ω		3		ns
R_{Sh}	Shunt resistance	U_R = 10 mV	2			GΩ
V_{BR}	Breakdown voltage	I_R = 2 µA	20			V
	N.E.P.	V_R = 10 mV; λ = 550 nm		3 E-15	8 E-15	W/√Hz
	Cross talk	λ = 550 nm			1	%
	Photo current uniformity	U_R = 5 V; λ = 550 nm			10	%

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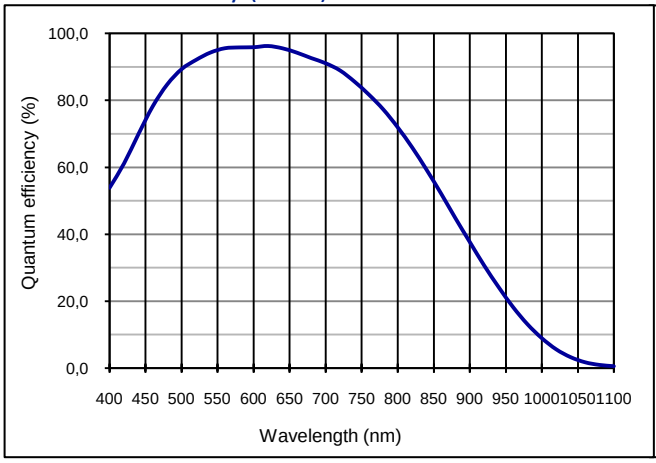
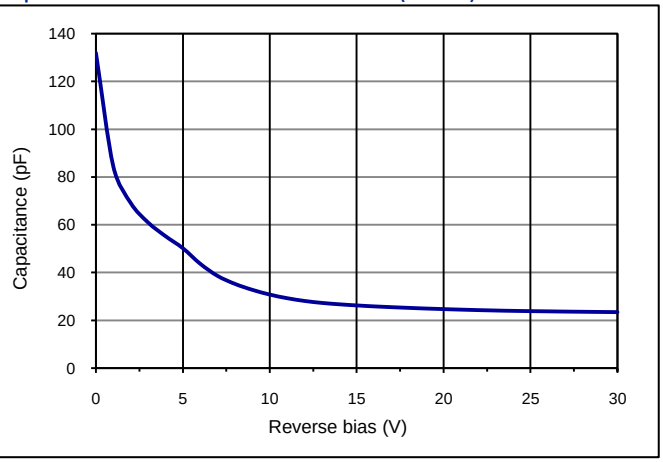
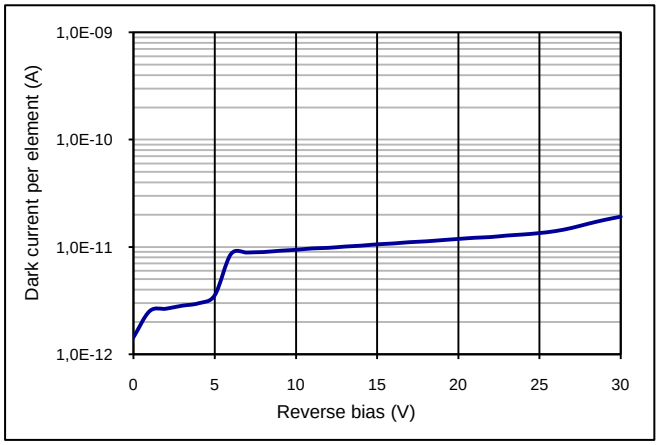
Quantum efficiency (23 °C)



Capacitance as fct of reverse bias (23 °C)



Dark current as fct of reverse bias (23 °C)



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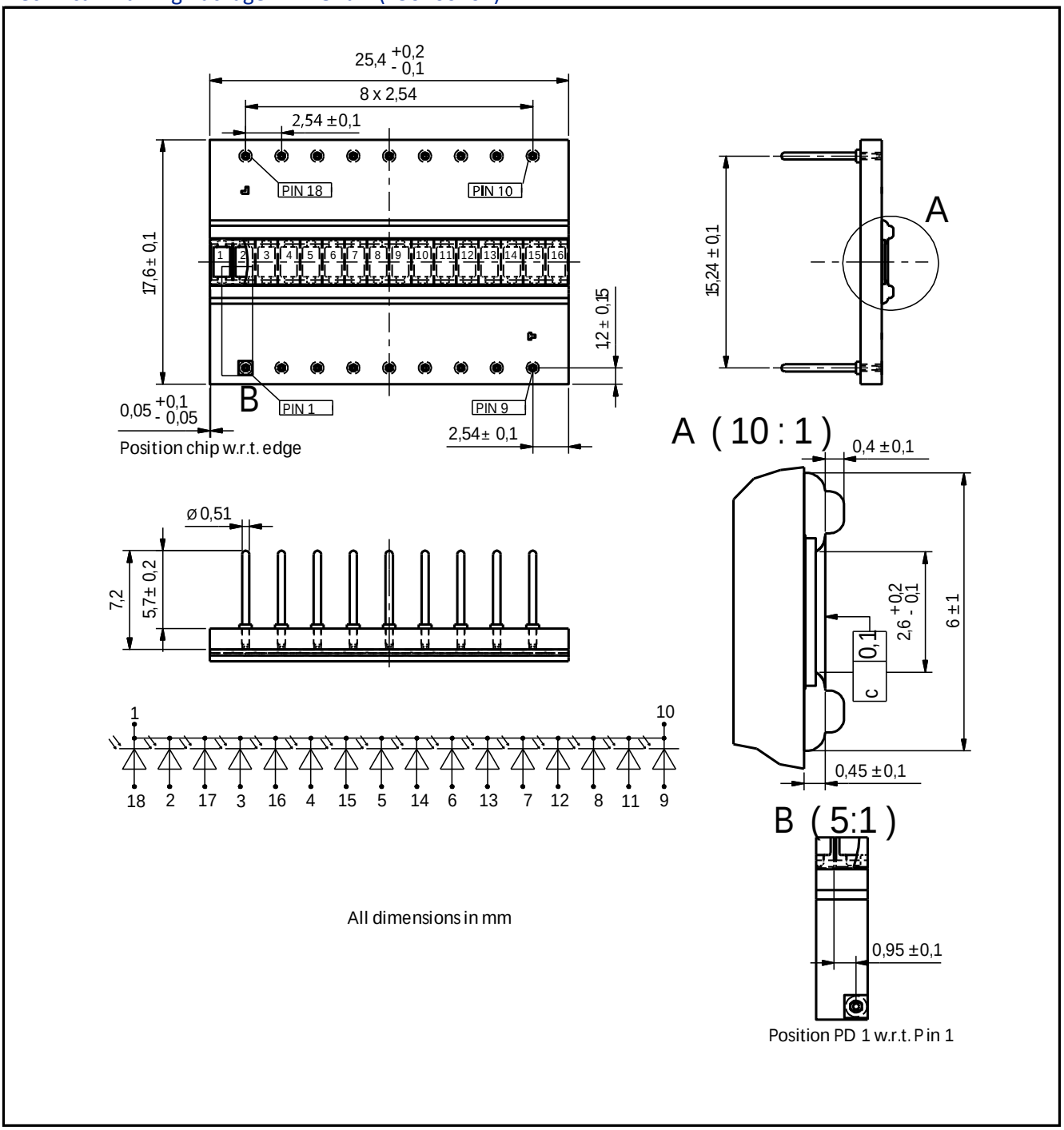
Technical Drawing Package: DIL18 full (#50160201)



Handling: Please refer to document "Instructions for handling and processing"

Disclaimer: Due to our strive for continuous improvement, specifications are subject to change within our PCN policy according to JESD46C.

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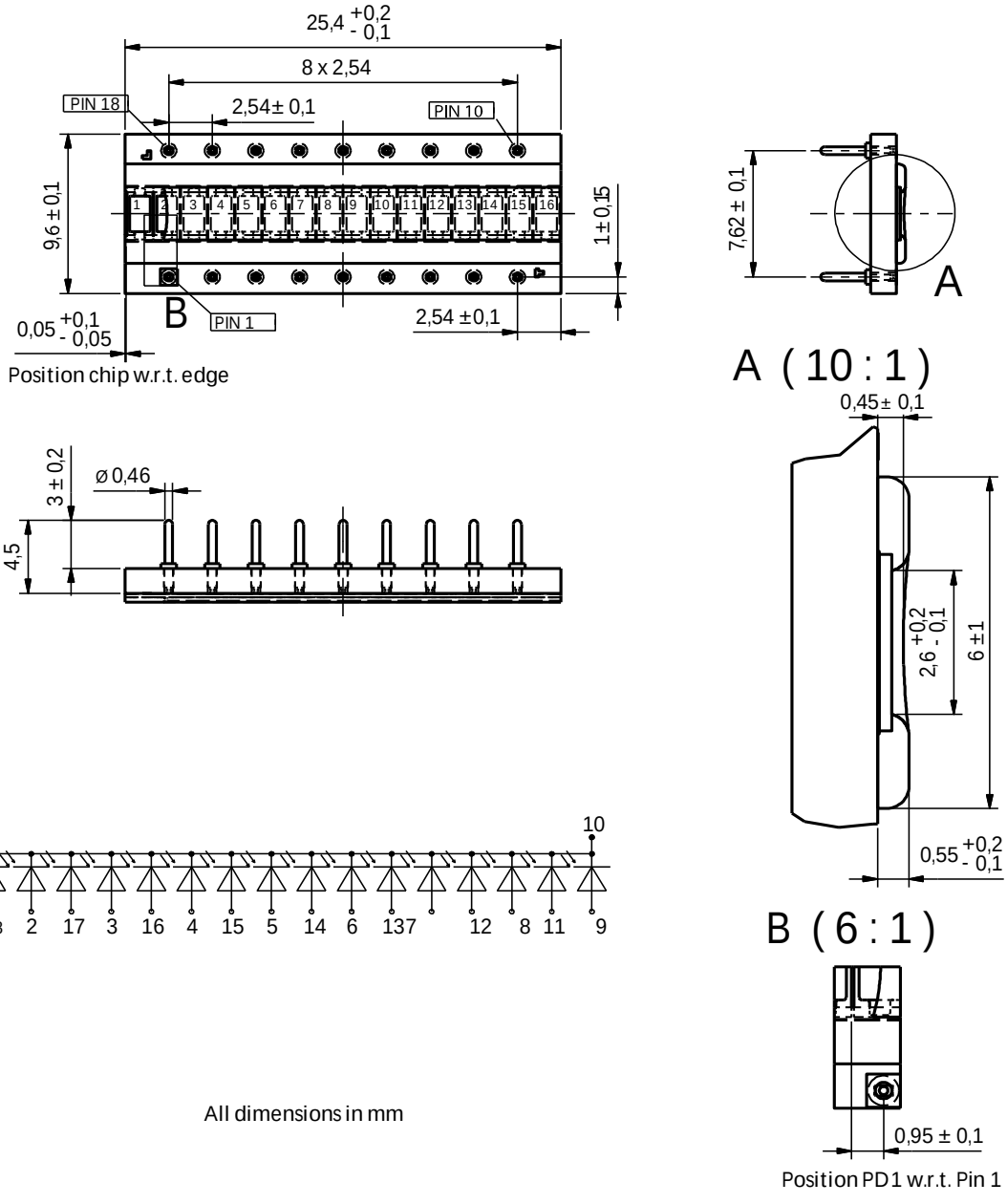
Technical Drawing Package: DIL18 slim (#50160202)



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