

65P155AM OECA-ST140

PIN/Preamp 155Mbps
650 / 850nm

Description

The 65P155AM OECA-ST140 is a PinPreamp in a plastic DIP receptacle with ST-flange.

The assembled TO-46 device is electrical isolated from the ST metal flange (maximum voltage 20V) to protect the diode against ESD-damaging.

This optical receiver consists of a high sensitive Si-PIN photodiode and a low noise transimpedance amplifier (TIA). It is designed for short distance FDDI and ATM up to 155 Mbps. The preamplifier's linearity and absence of automatic gain control makes it ideal for analog applications and applications with bursty signals. Its large area detector is optimized for polymer optical fiber (POF) with 980µm core-diameter.

The receiver includes an average photocurrent monitor (RSSI).



Device can differ from picture.
For details and pin out please refer to the drawing..

Applications

- IEEE Fast Ethernet
- Automotive Networking
- Industrial Networking

Absolute Maximum Ratings

Parameter	Symbol	min.	max.	Unit
Supply Voltage	V_{CC}		+6.0	V
Optical Input Power ($\lambda = 850\text{nm}$)	P_{max}		+7.0	dBm
Operating Temperature *	$T_{OP} = T_C$	-40	+85	°C
Storage Temperature	T_{stg}	-40	+85	°C
Soldering Temperature / Soldering Time	T_{sold}/t_{sold}		260/10	°C/s

* Extended Temperature Range on request.

Optical and Electrical Characteristics

$T_C=25^{\circ}\text{C} \pm 2^{\circ}\text{C} / V_{CC}=3.3\text{V}$

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Responsivity, differential	R	Note 1, 2, 7		5		kV/W
Differential Output Voltage	V_{OD}	Note 2, 3			450	mV
Spectral Response Range	λ		550		950	nm
Bandwidth (3 dB _{el})	f_C	Note 5	110	130		MHz
Sensitivity (BER = 10^{10})	S	ER = ∞ Note 4		-22	-26	dBm
Dynamic Range		BER= 10^{10} Note 4	25			dB
Output Resistance (per side)	R_O	Note 2	82	100	118	Ω
Power Supply Current	I_{CC}	Note 2 $P_f=0$		23	34	mA
Output Common Mode Voltage		Note 2		$V_{CC} - 0.225\text{V}$		V
Power Supply Rejection Ratio	PSRR	Note 2 $f < 1\text{MHz}$, referred to output		t.b.d.		dB
Monitor Nominal Gain	G_{NOM}		0.8	1	1.2	A/A
Monitor Bandwidth		$P_{IN}=2\mu\text{W}$		5		kHz

Source: 850nm; Fiber 980/1000 μm

Incident power increases V_{OUT+} and decreases V_{OUT-} .

Note 1: $P_f = 10\mu\text{W}$ PeakPeak power at 100 MHz 50% duty cycle

Note 2: $R_L = 200\Omega$ load between $OUT+$ and $OUT-$

Note 3: $P_f = 1.8\text{mW}$ PeakPeak power at 100MHz 50% duty cycle

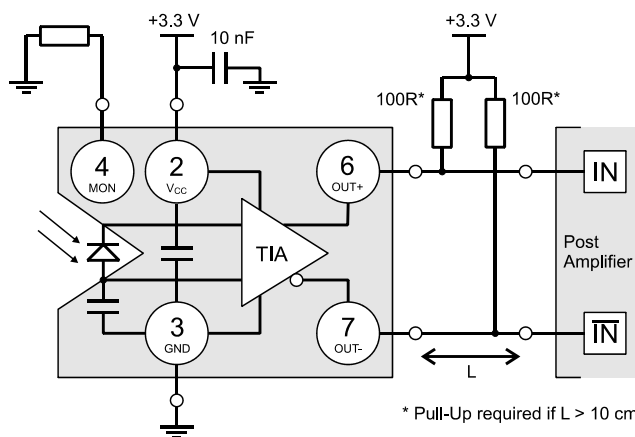
Note 4: Measured with a 117MHz, 3pole Bessel filter

Note 5: $C_{OUT} = 5\text{pF}$

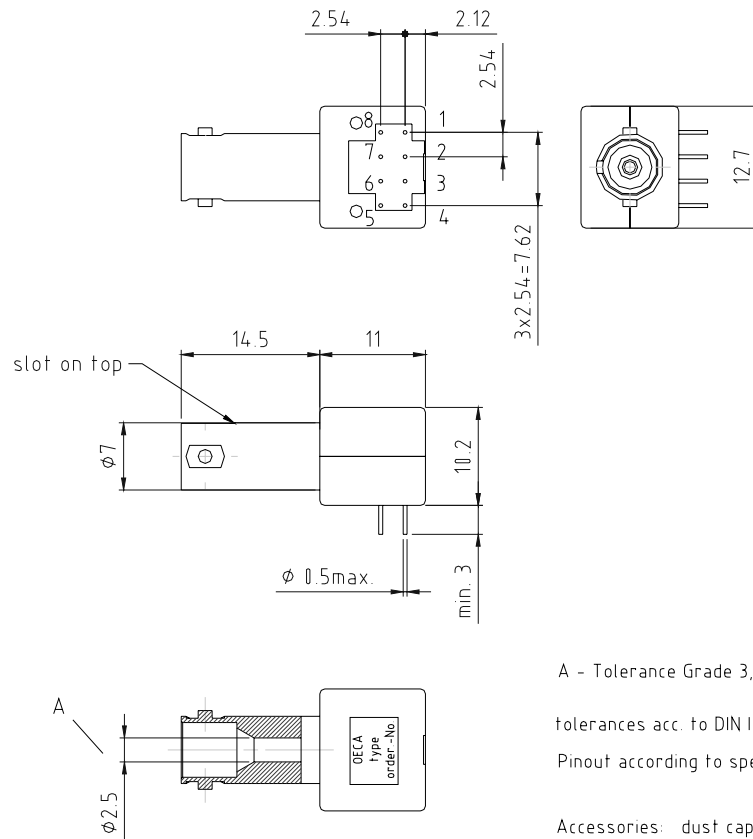
Note 6: $PWD = [(\text{width of wider pulse}) - (\text{width of narrower pulse})] / 2$. Input is 155Mbps 10 pattern, with rise time of approximately 2ns.

Note 7: Responsivity at 660nm 3 kV/W typ.

Functional Schematic / Typical Application Circuit



Drawing



A - Tolerance Grade 3, DIN EN 61754-2

tolerances acc. to DIN ISO 2768mH

Pinout according to specification

Accessories: dust cap

All dimensions in mm.

Pin-Out

Pin	65P155AM
1	n.c.
2	V _{CC}
3	GND
4	MON
5	n.c.
6	OUT+
7	OUT-
8	n.c.

Other pin outs on request.

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