

General Description

The OIL160-520 is a green LED designed for fiber optic data communications.

The green light provides lower attenuation in plastic optical fiber compared to traditional red light.

Another big advantage is the output optical power, that can reach +2dBm, compared to -1dBm of traditional red leds.

The final goal is that temperature range is also wider, when compared to red emitters of the same field.

Due to these big improvements the covering distance of an optical link in 1mm POF can be extended beyond 300m.

Different packaging connectors are available, especially designed for plastic fiber coupling.



Applications

- Data transmission for industrial environment
- Data transmission in factory and office automation
- Industrial LAN and FIELD BUS
- Home and Building Automation
- General fiber optic transmission systems
- Galvanic insulation/optocoupling

Features

- Very high power output
- Plastic fiber links up to 300m
- Especially designed for POF
- Available in plastic or robust metal case
- RoHS and REACH compliant
- Suitable also for 50-100-200um HCS

Pin Functions

See different packaging options in mechanical section

No.	Name	Function
K		Cathode (internally connected to TO)
A		Anode

Ordering information

OIL160-520-SMA-M	Optical emitter 16Mbd 520nm in metal sma standard package
OIL160-520-SMA-MZ	Optical emitter 16Mbd 520nm in metal sma Zn diecast package
OIL160-520-SMA-MZP	Optical emitter 16Mbd 520nm in metal sma Zn diecast package, additional pins
OIL160-520-ST-M	Optical emitter 16Mbd 520nm in metal ST package
OIL160-520-VL-P	Optical emitter 16Mbd 520nm in plastic versatile link package



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Min	Max	Unit
I _F	Forward current @ T _A =25°C	2	50	mA
V _R	Reverse voltage @ I _R =10uA and T _A =25°C		5	V
I _{FM}	Pulsed Forward current (Pulse width = 1us, duty cycle 50%)	2	100	mA
T _{opr}	Operating temperature	-40	100	°C
T _{stg}	Storage temperature	-40	100	°C
R _{thja}	Thermal resistance junction to ambient		170	K/W
T _{Sol}	Lead Temperature (solder) 5s at 1mm		260	°C
MSL	Moisture Sensitive Level		1	

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

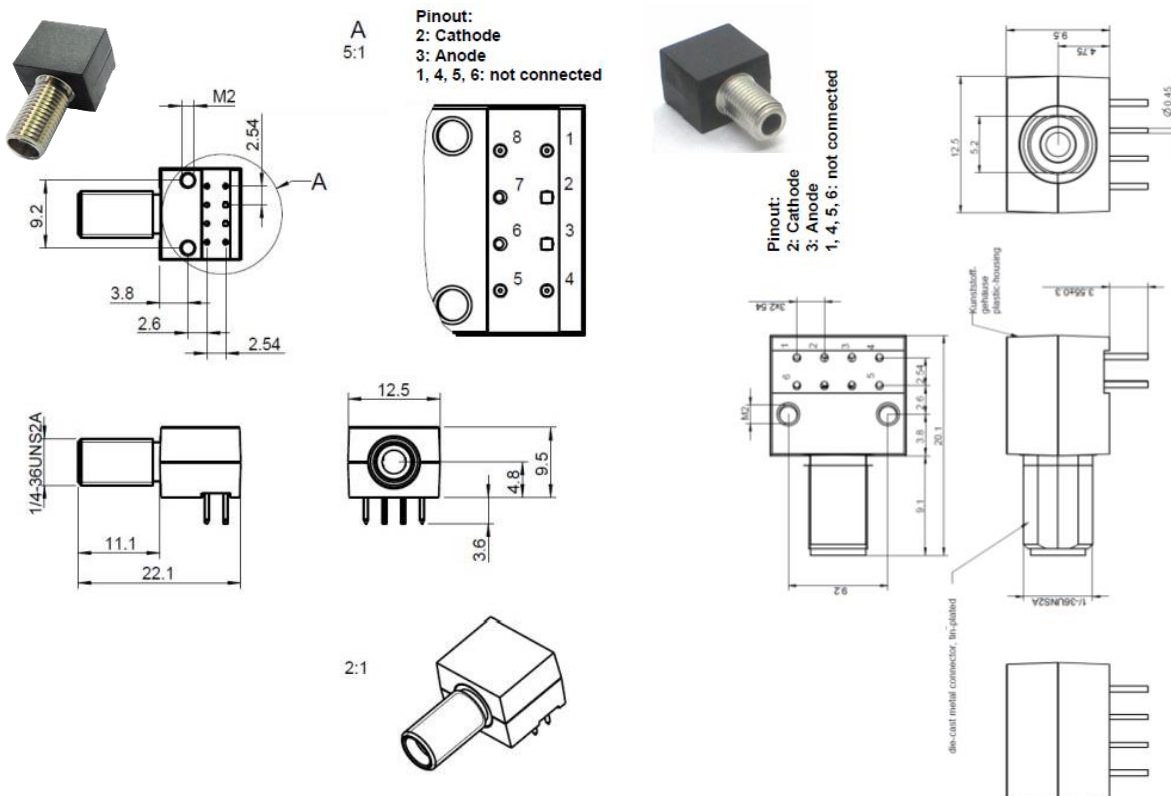
ELECTRICAL AND OPTICAL CHARACTERISTICS

T_A=25°C and I_F=20mA unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
f _c	Cut off frequency	100kHz, -3dB	5	10		MHz
λ _p	Peak emission wavelength			520		nm
Δλ	Spectral half width			35		nm
P _o	Fiber coupled output power	1mm POF	2			dBm
V _F	Forward voltage			2.7		V

MECHANICAL DIMENSIONS

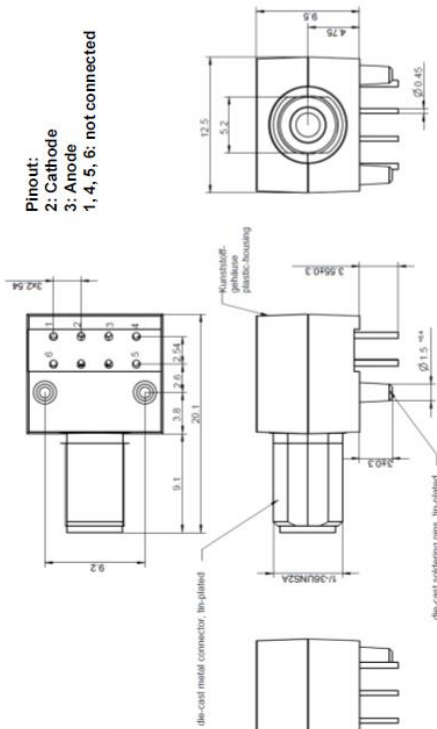
Units=mm



OIL160-520-SMA-M (SMA METAL NICKEL PLATED)

OIL160-520-SMA-MZ (SMA METAL ZINC DIE CAST)

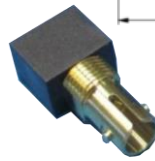
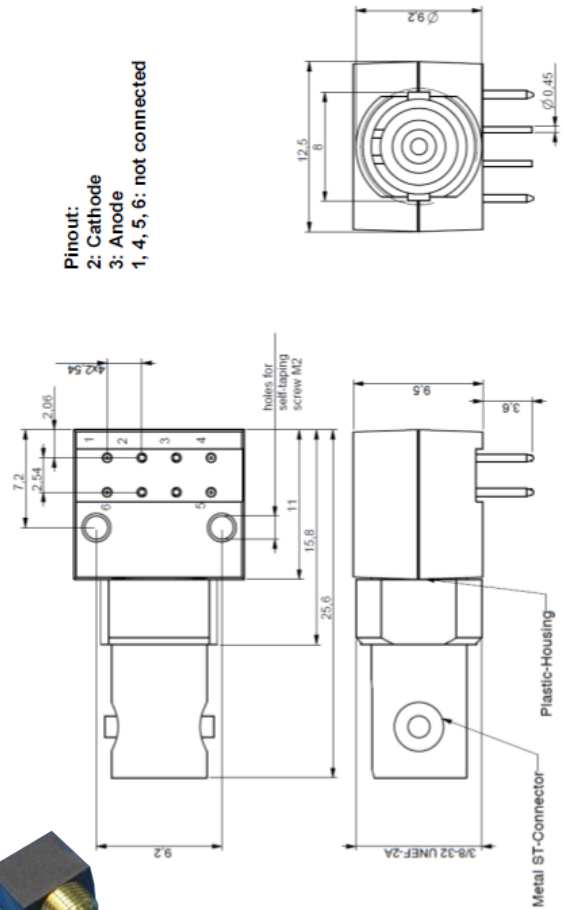
Pinout:
2: Cathode
3: Anode
1, 4, 5, 6: not connected



OIL160-520-SMA-MZP

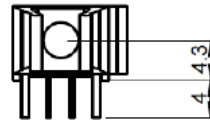
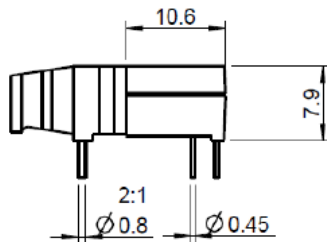
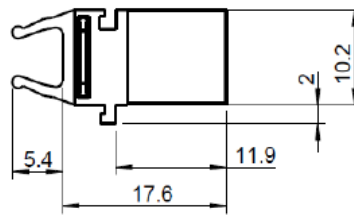
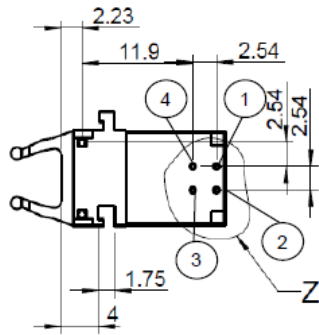
(SMA METAL ZINC DIE CAST WITH ADDITIONAL PINS)

Pinout:
2: Cathode
3: Anode
1, 4, 5, 6: not connected

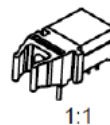


OIL160-520-ST-M

(ST METAL)



Pinout:
1: Cathode
2: Anode
3, 4: not connected



OIL160-520-VL-P (VERSATILE LINK PLASTIC PACKAGE)