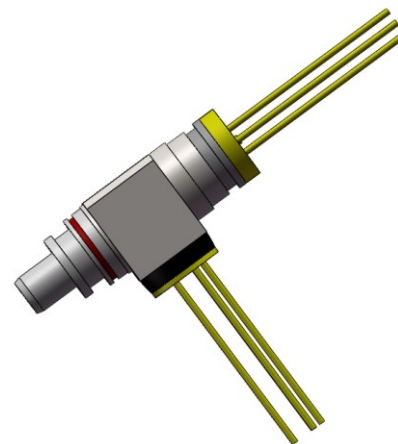


ETRRDxTxxFKxT3EKXxxGlxx

With 1270nm&1330nm MQW-DFB Laser Diode for 10G and 1330nm&1270nm PT for 10G transmission



Features

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-DFB laser Diode
- ◆ Low threshold, high slope efficiency and high output power
- ◆ Operating Case temperature: -40°C to +85°C
- ◆ single-mode fiber-stub with LC connector
- ◆ High channel isolation
- ◆ Low return loss

Applications

- ◆ Long distance digital transmission system
- ◆ Cable television system
- ◆ WDM systems

Absolute maximum ratings^{*Note1}

Parameter	Symbol	Min	Max	Unit
Storage temperature	Tstg	-40	85	°C
Operating case temperature	Top	-40	85	°C
Forward current (LD)	IFD	---	150	mA
Reverse voltage (LD)	VrL	---	2	V
Reverse voltage (PD)	VrP	---	20	V
Reverse current (PD)	IrP	---	2	mA
Power Supply Voltage	V _P	0	5	V
Optical Power	Pin	---	5	dBm
Soldering temperature (<10s)	Stemp	---	260	°C

*Note1: Exceeding any one of these values may destroy the device immediately.

Transmitter Optical And Electrical Characteristics

(Unless specified else,the specifications below are defined at Tc=25°C)

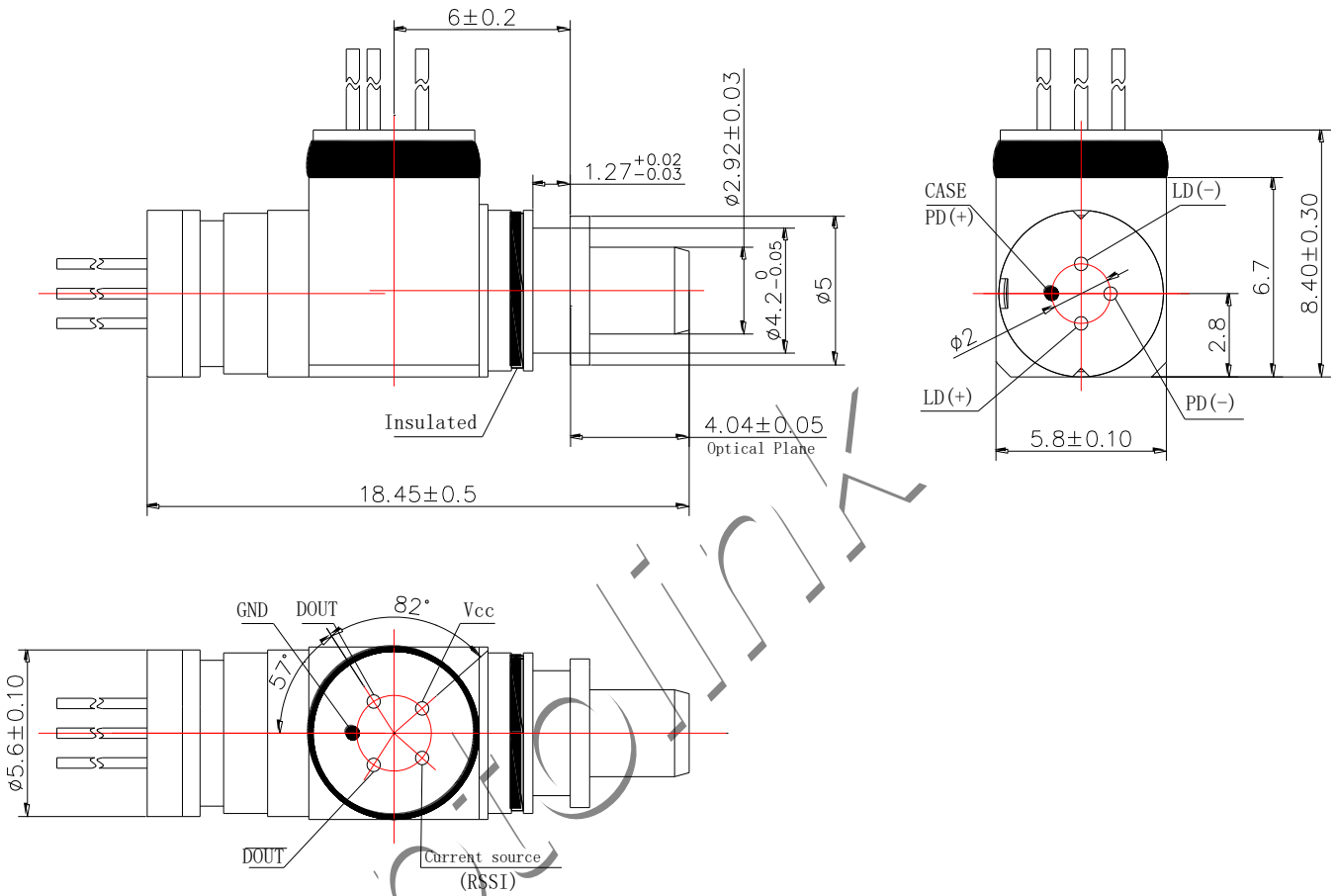
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Threshold Current	I _{th}	5	-	15	mA	T _c =25°C
		-	20	40	mA	T _c =85°C
Operating Voltage	V _{op}	-	1.3	1.7	V	CW, I _{op} =I _{th} +20mA,
Output Optical Power	P _f	0.5	-	2.99	mW	CW, I _{op} =I _{th} +20mA
Center Wavelength	λ ₁	1260	1270	1280	nm	CW, I _{op} =I _{th} +20mA, T _c =-40~85°C
	λ ₂	1320	1330	1340		
Spectrum Width (-20dB)	Δλ	-	-	1.0	nm	CW, I _{op} =I _{th} +20mA, T _c =-40~85°C
Side Mode Suppression Ratio	SMSR	35	-	-	dB	CW, I _{op} =I _{th} +20mA, T _c =-40~85°C
Rise Time	T _r	-	35	-	ps	20%~80%
Fall Time	T _f	-	45	-	ps	80%~20%
Monitor Current	I _{mon}	0.1	-	1.0	mA	VR=5V, CW, I _{op} =I _{th} +20mA
Monitor Dark Current	I _d	-	-	0.1	μA	VRD=5V
Tracking Error	TE	-1.5	-	1.5	dB	CW, T _c =-40~85°C

Receiver Optical And Electrical Characteristics

(Unless specified else,the specifications below are defined at Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Wavelength	λ ₁	1320	1330	1340	nm	
	λ ₂	1260	1270	1280		
Supply Voltage	V _{cc}	3.0	3.3	3.6	V	
Supply Current	I _{cc}	-	27	34	mA	RL = 50Ω
Saturated power	P _{sat}	1.5	-	-	dBm	
Sensitivity	Sen	-	-	-16	dBm	λ=1270nm&1330nm,10.3125G, PRBS2 ³¹ -1,ER=5dB, BER=10 ⁻¹²
Bandwidth	BW	-	10	-	GHz	
Optical cross talk	CT	-	-	-40	dB	
Dark current	I _d	-	-	50	nA	T _c =25°C

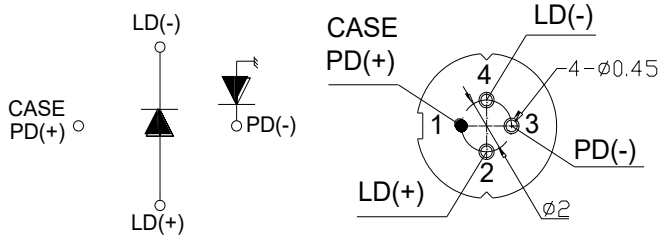
Package dimension ^{*Note2}



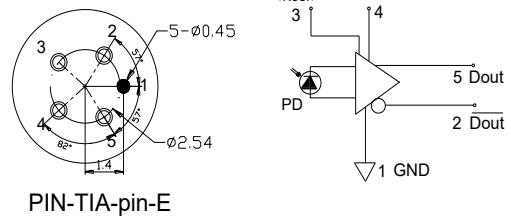
Note2: PIN direction and laser mark can be customized.

Pin Assignment ^{*Note3}

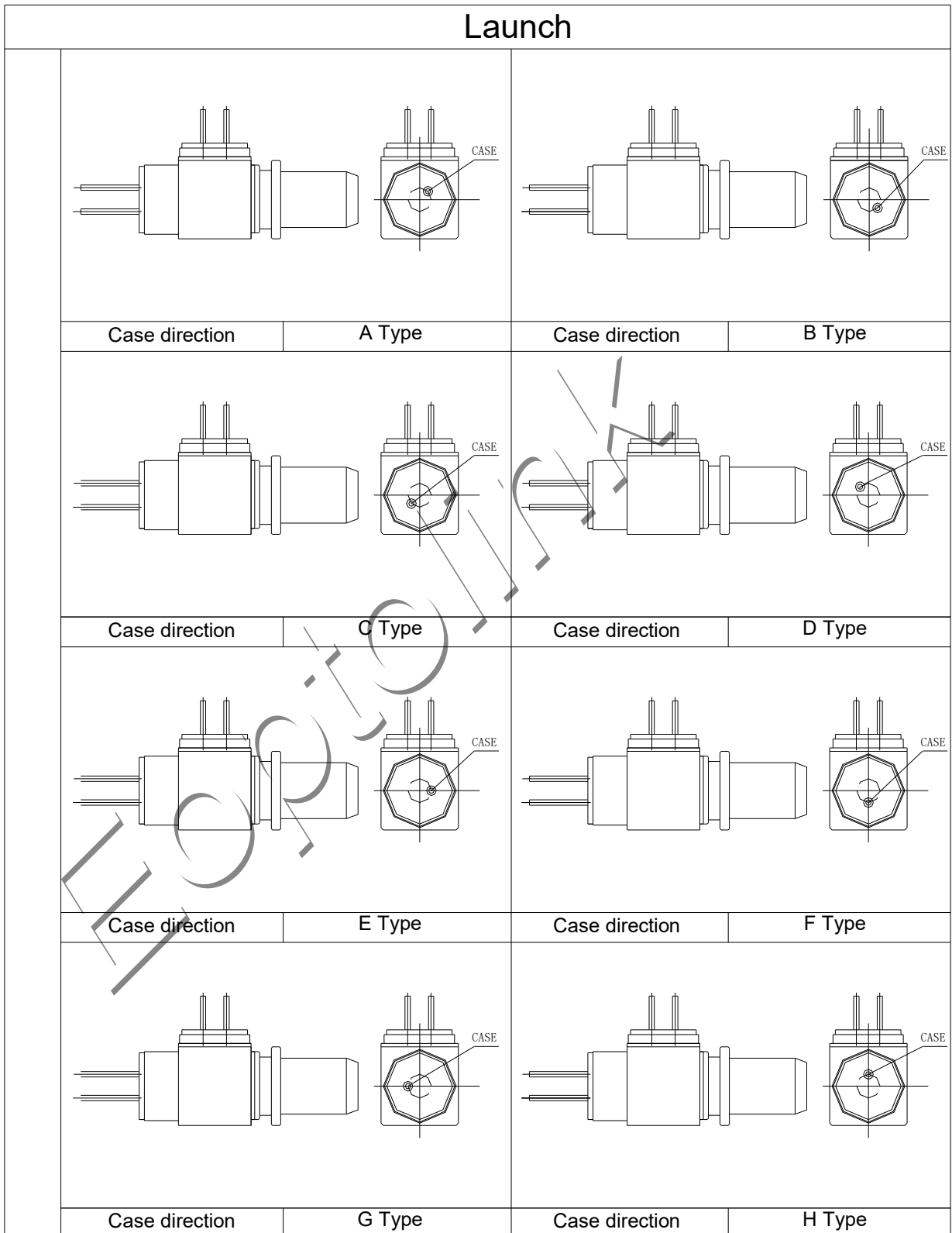
TYPE: 4



TYPE: E



Note3: Pin assignment can be customized.

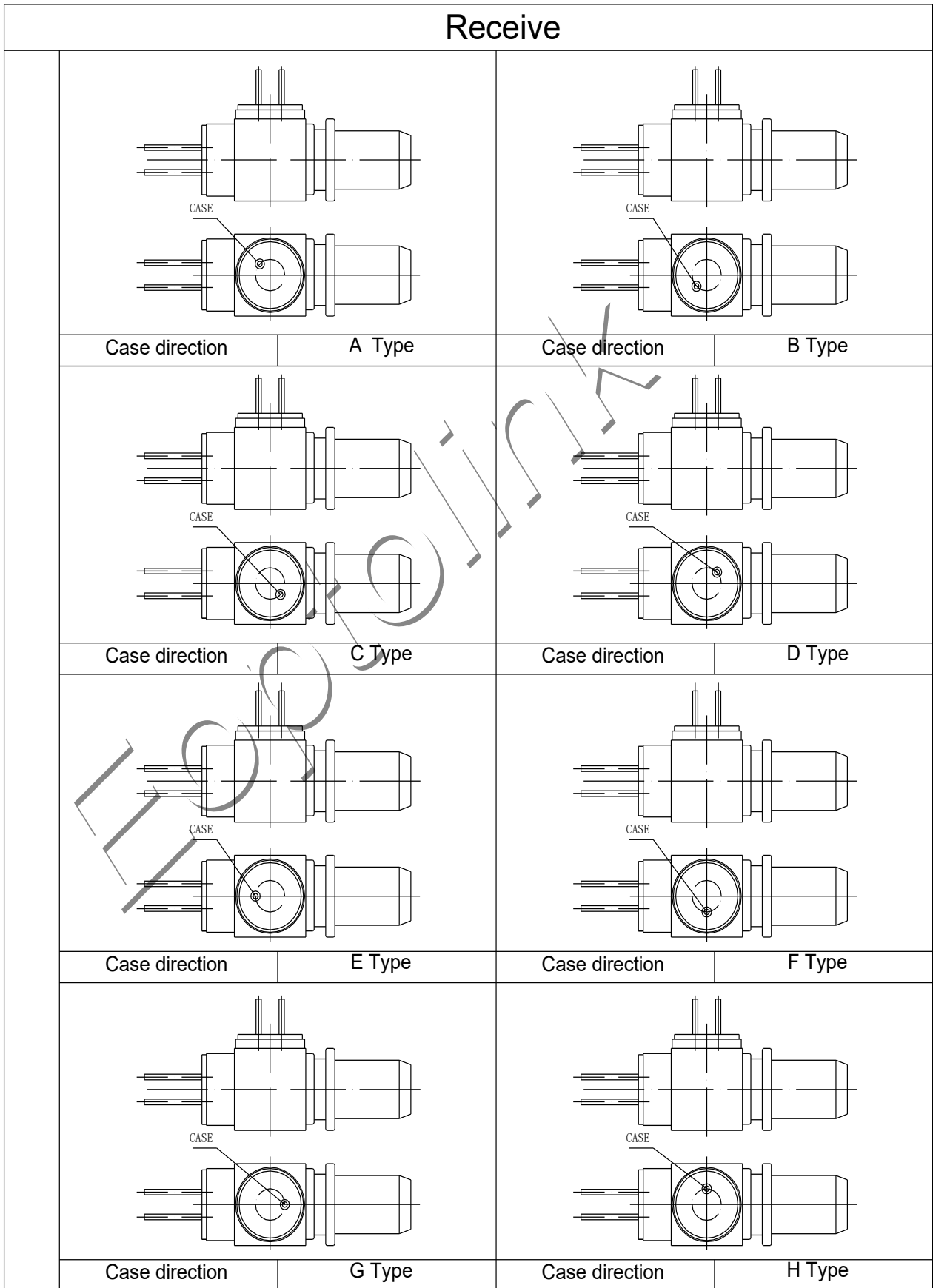


Note4: This picture is for pluggable, pigtail BIDI chip PIN package direction's reference

Note5: This picture is suitable for RX Pin direction comparison .

Note6: The package direction is described as "x-x" For example "A-B", "A" is TX chip Pin direction, "B" is RX chip Pin direction.

RX Pin Order Code



Ordering information (Standard version) ^{*Note7}

Part No	Laser type	Transmitter/Receiver
ETRRDAT08FKDT3EKXGEGIGF	DFB	1270T/1330R
ETRRDDT08FKAT3EKXGEGIGF	DFB	1330T/1270R

Note7: For more ordering information, please refer to nomenclature or contact EOPTOLINK sales.

ETRR

A B C D E F G H I J K L M N O P Q

Code	Parameter	Detailed Description								
A	Laser Type	D=DFB LD								
B	Launch Wavelength	A=1270nm			D=1330nm					
C	Launch Data rate	T=10Gbps								
D	Output Power	08=0.5~0.99mW			16=0.8~1.2mW			xx=Customization		
E	TX Pin Type	F=LD-pin-4								
F	TX Chip Type	K=Eoptolink								
G	Receiver Wavelength	D=1330nm			A=1270nm					
H	Receiver Data rate	T=10Gbps								
I	Receiver Voltage	3=3.3V								
J	RX Pin Type	E= pin-E								
K	RX Chip Type	K= Eoptolink								
L	Connector	X=LC								
M	TX Pin Package Direction	A	B	C	D	E	F	G	H	
N	RX Pin Package Direction	A	B	C	D	E	F	G	H	
O	Isolator	Blank=None			G=with I					
P	Receptacle Frame	I=Insulated								
Q	TIA Type	GF=GN1068			xx=Customization					

Precaution

- (1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Revision History

Revision	Initiated	Reviewed	Approved	Revision History	Release Date
Va-1	James.liu	Vincent.yu	Zore.Zhao	Initial	2023.7.11

Notice:

Eoptolink reserves the right to make changes or discontinue any product or service identified in this publication, without notice, in order to improve design and/or performance. Applications that are described herein for any of the products are for illustrative purposes only. Eoptolink makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Contact:

Add: No.127 West Wulian Street, Shuangliu District, Chengdu, 610213, P.R. CHINA

Tel: (+86) 028-67087999

Fax: (+86) 028-67087979

E-mail:sales@eoptolink.com

<http://www.eoptolink.com>