

# EA-4000 Eye Analyzer

OPTICAL AND ELECTRICAL SAMPLING SCOPE

■ The fastest sampling scope in the industry supporting up to 28G NRZ signals.



## KEY FEATURES

Ultra-fast 1M sample/s, measures 1000 waveforms in 2 seconds (2000 sample/waveform)

Supporting NRZ signals up to 28G

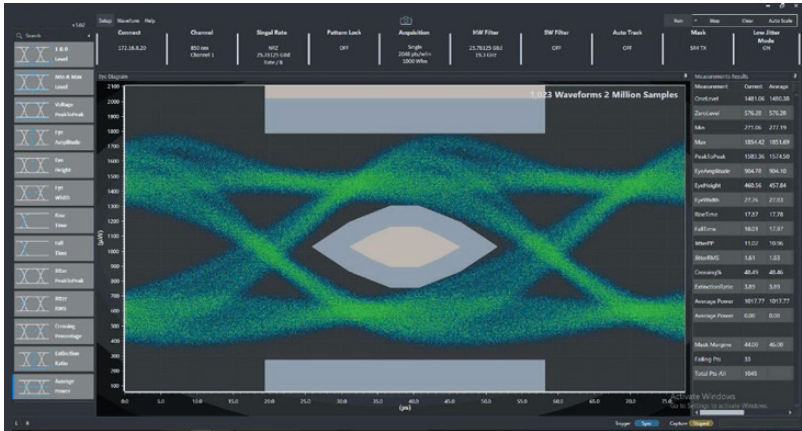
Optical receiver supports singlemode and multimode

Repeatable measurements and comparable to tier-1 scope

Built-in low jitter mode

Supporting 1.25G, 2.5G and 10G for PON applications (e.g., GPON, EPON, XGS-PON)

## COMPELLING EYE SHARPENING FOR PRODUCTION TESTING



Intuitive GUI for NRZ eye diagrams

## SPECIFICATIONS

All specifications are typical at 23 °C ± 2 °C unless otherwise specified.

### TECHNICAL SPECIFICATIONS

#### Electrical

Sampling speed (sample/s)	1,000,000
Bandwidth (GHz)	33 (at 3 dB)
Input range ( $V_{ppd}$ )	1.0 (max.)
Damage amplitude ( $V_{ppd}$ )	1.7 (max.)
Connector type	K(f) (50 $\Omega$ )
Return loss (dB)	-6.5 (at 32 GHz)
RMS noise (mV)	2.0 / 2.5 (max.)

#### Optical

Unfiltered bandwidth (GHz)	33 (for 28G optical)
Wavelength (nm)	830 to 1600 (full range model) 1250 to 1600 (SMF model)
Return loss (dB)	-24 (full range model) -30 (SMF model)
Mask sensitivity (dBm) (CWDM4 mask, mask margin 0%, hit count 0)	-8 (at 850 nm) -10 (at 1310 nm)
Damage power (mW)	8
Connector type	FC/PC (50/125 $\mu$ m) (full range model) FC/PC (9/125 $\mu$ m) (SMF model)

#### Clock

Clock input ratio	/2, /4, /8, /16, /32, /64
Trigger jitter (fs)	<290
Sensitivity (mV)	100

## GENERAL SPECIFICATIONS

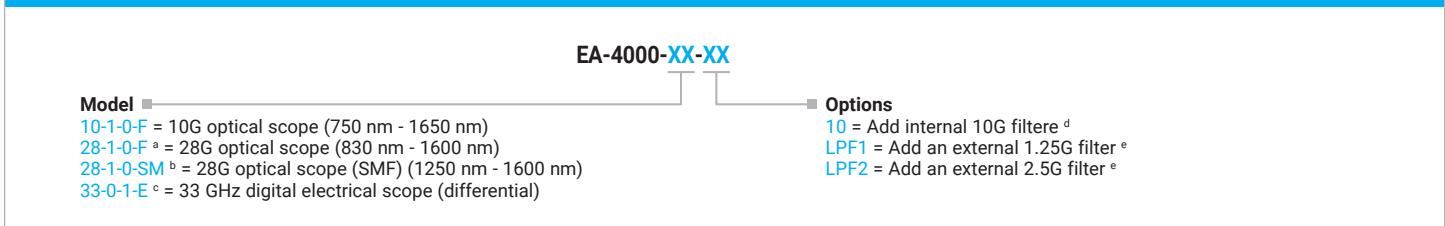
Size (H x W x D)	103 mm x 442 mm x 300 mm (4.1 in x 17.4 in x 11.8 in)
Weight	≤10 kg (22 lb)
Temperature	Operating Storage
	5 °C to 40 °C (41 °F to 104 °F) -20 °C to 70 °C (-4 °F to 158 °F)
Relative humidity	20% to 80%
Power <sup>a</sup>	100/120 Vac (50/60/400 Hz) 220/240 Vac (50/60 Hz) 60 W typical/80 W max.
Access interface	Gigabit Ethernet (RJ45 port)

a. Operate with supply voltage fluctuations up to ±10 % of the nominal voltage.

## MODEL NUMBER

EA-4000	Description	Wavelength range	Connector type	10G filter (opt. 10)	2.5G filter (opt. LPF2)	1.25G filter (opt. LPF1)	Application
33-0-1-E	33 GHz Electrical Scope	n/a	K (2.92mm)	–	–	–	Electrical eye diagram
28-1-0-F	28G Optical Scope supporting internal 10G filter	830 – 1600 nm	FC/PC (50/125 μm)	✓	–	–	Full range – singlemode and multimode, 10G PON testing capability
28-1-0-SM	28G Optical Scope supporting internal 10G filter	1250 – 1600 nm	FC/PC (9/125 μm)	✓	–	–	Singlemode, 10G PON testing capability
10-1-0-F	10G Optical Scope supporting external 1.25G and 2.5G filters	750 – 1650 nm	FC/PC (62.5/125 μm)	–	✓	✓	GPON, EPON, XGS-PON, etc.

## ORDERING INFORMATION



- a. Multimode and singlemode supported.  
b. Best for singlemode.  
c. Best for electrical EYE.  
d. Available for EA-4000-28-1-0-F and EA-4000-28-1-0-SM.  
e. Only available for EA-4000-10-1-0-F.

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