

FBG Strain Sensor ES-01&EST-01

Embedded FBG strain sensor ES-01&EST-01 is specially used for the internal strain measurement of concrete, reinforced concrete or plastic materials, so as to observe the change of internal stress of the structure for a long time, conduct state analysis, and achieve the purpose of warning and object health status diagnosis. The sensor is small in size and easy to install. It is connected in series or in parallel, and it is easy to form a quasi-distributed sensor network.

Key Features

- Anti-electromagnetic interference, lightning strike, corrosion resistance
- High measurement accuracy and reliability
- Built-in temperature compensation for EST-01
- Easy to set up distributed sensor network
- Easy installation for long-term monitoring



Applications

- Health monitoring of civil engineering structures such as bridges, dams, tunnels, buildings, etc.
- Reinforced concrete stress and strain monitoring
- Transportation industry (rail, road, aerospace)
- Structural health monitoring of oil, gas pipelines and offshore oil platforms

Specifications

Parameter	Unit	Value	
		ES-01	EST-01
Center Wavelength	nm	1460 ~ 1610	
Range	$\mu\epsilon$	± 1500	
Resolution	$\mu\epsilon$	0.05% F.S.	
Accuracy	$\mu\epsilon$	0.5% F.S.	
Temperature Compensation	--	No	Yes
Material	--	Stainless steel	
Dimension	mm	$\Phi 23 \times 110$	
Installation	--	Embedded	
Pigtail Length	m	$\Phi 3\text{mm}$ armored cable, 1m at both ends, or customize	
Optical Connector	--	FC/APC, or customize	
Operating Temperature	$^{\circ}\text{C}$	-20 ~ +80	