

High Temperature Fiber Bragg Grating Sensing Cable (1)

Cable Number: FBGCAL1001P (Maximum application temperature: 300°C)

Cable structure: composed of a high nickel alloy capillary tube and a FBG array (see Figure)

Mechanical Characteristics:

High nickel alloy tubing material: Incoloy 825 Cable outside diameter: 6.35mm

Tubing thickness: 0.89mm Weight: 123.5kg/km

Tensile strength: 1070kg Pull load (yield point): 588kg

Thermal expansion coefficient: $14.2 \times 10^{-6} \text{m/m}^\circ\text{C}$ Work pressure limit: 53MPa

Standards: ASME: B 704; NACE MR0175/ISO 15156-3: Table A.12 (4c), A.14

FBG Array : Polyimide coated single mode fiber: SMF28

Wavelength range: 1510nm-1590nm

FBG number: max 40 corresponding to the application temperature of 300°C

Cable Toe End Termination: Upon customer request

Or: Upon UniSignal design:

Hermetic seal (no moving parts)

Special mechanical and optical designs at the fiber end

