

Gooch & Housego



OCT Coupler 850nm & 1300nm Wideband

Fibre optic couplers are used in the OCT light engine to form the interferometer that OCT systems use to generate depth information. A coupler with low wavelength dependence allows the system to operate over a wide wavelength range which increases depth resolution.

The OCT Wideband Coupler splits over a wide bandwidth at the popular OCT wavelength bands of 850nm & 1300nm.

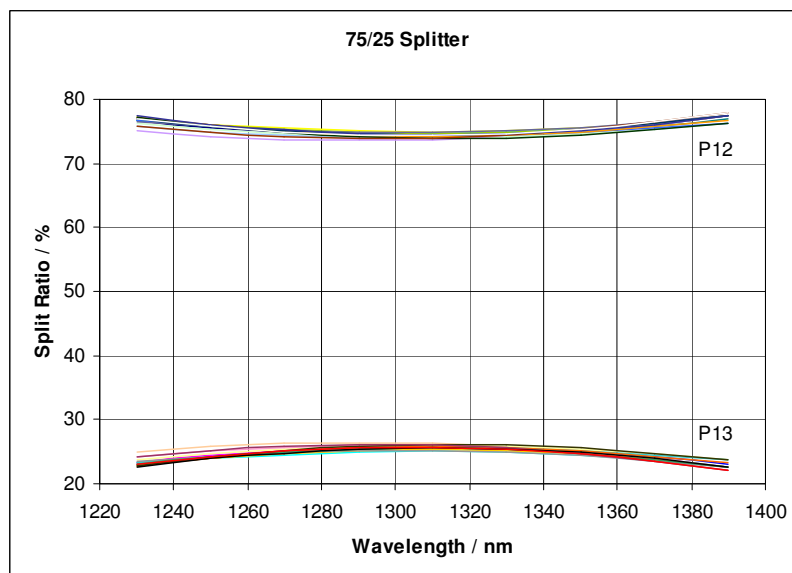
Designed for low loss and wide bandwidth operation, the coupler utilises Gooch & Housego's proprietary fused fibre technology.

Key Features:

- Very low light loss
- Any coupling ratio available
- Wide bandwidth operation
- Various fibre options available

Associated Documents:

- OCT Coupler 1060nm
- OCT Coupler Ultra Wideband
- OCT Fibre Collimators
- OCT Coupler Application Note



A sample of 75/25% couplers plotted in the wavelength range 1230nm to 1390nm



光技術をサポートする
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Typical Optical Specifications

Coupling Ratio (%) ₁	Measured Bandwidth	800nm Band Excess Loss (dB) ₂	1300nm or 1500nm Band Excess Loss (dB) ₂	800nm Band Coupling Ratio Tolerance ₂	1300nm or 1500nm Band Coupling Ratio Tolerance ₂	Available Housing Option
1	A = ±20nm	0.10	0.10	±0.35%	±0.30%	3,4,5,6
	B = ±35nm	0.10	0.10	±0.45%	±0.40%	
	C = ±50nm	0.10	0.10	±0.55%	±0.50%	
10	A = ±20nm	0.13	0.10	±2.0%	±1.5%	3,4,5,6
	B = ±35nm	0.13	0.10	±3%	±2.5%	
	C = ±50nm	0.13	0.10	±4%	±3.5%	
20	A = ±20nm	0.15	0.13	±2.5%	±2%	3,4,5,6
	B = ±35nm	0.15	0.13	±3.5%	±3%	
	C = ±50nm	0.15	0.13	±4.5%	±4%	
30	A = ±20nm	0.20	0.13	±2.75%	±2.5%	3,4,5,6
	B = ±35nm	0.20	0.13	±3.75%	±3.5%	
	C = ±50nm	0.20	0.13	±4.75%	±4.5%	
50	A = ±20nm	0.25	0.15	±4%	±3.5%	3,4,5,6
	B = ±35nm	0.25	0.15	±5.5%	±5%	
	C = ±50nm	0.25	0.15	±7%	±6.5%	

- Any coupling ratio available. Please contact sales office for details on coupling ratios not listed.
- Measured through P1 to P2 and P3

Parameter	Specification	Unit
Operating / Storage Temperature Range ₁	-40 to +75 / -40 to + 85	°C
Pigtail Tensile Load	5	N
Fibre Type ₂	Speciality singlemode fibre	

- For connectorised component, operating temperature range is -5 to +75°C.
- Fibre type to be confirmed upon request.

Housing Option

Housing Code	Description	1x2, 2x2 Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 50 (L)	Primary-coated fibre
4	Ø0.9 mm slim	3.0 (Ø) x 60 (L)	Ø 0.9mm loose-tube
5	Ø 0.9 mm semi-ruggedised	5.0 (Ø) x 75 (L)	Ø 0.9 mm loose-tube
6	Ø 3.0 mm fully-ruggedised	80 (L) x 10 (W) x 8 (H)	Ø 3.0 mm fan-out sleeving

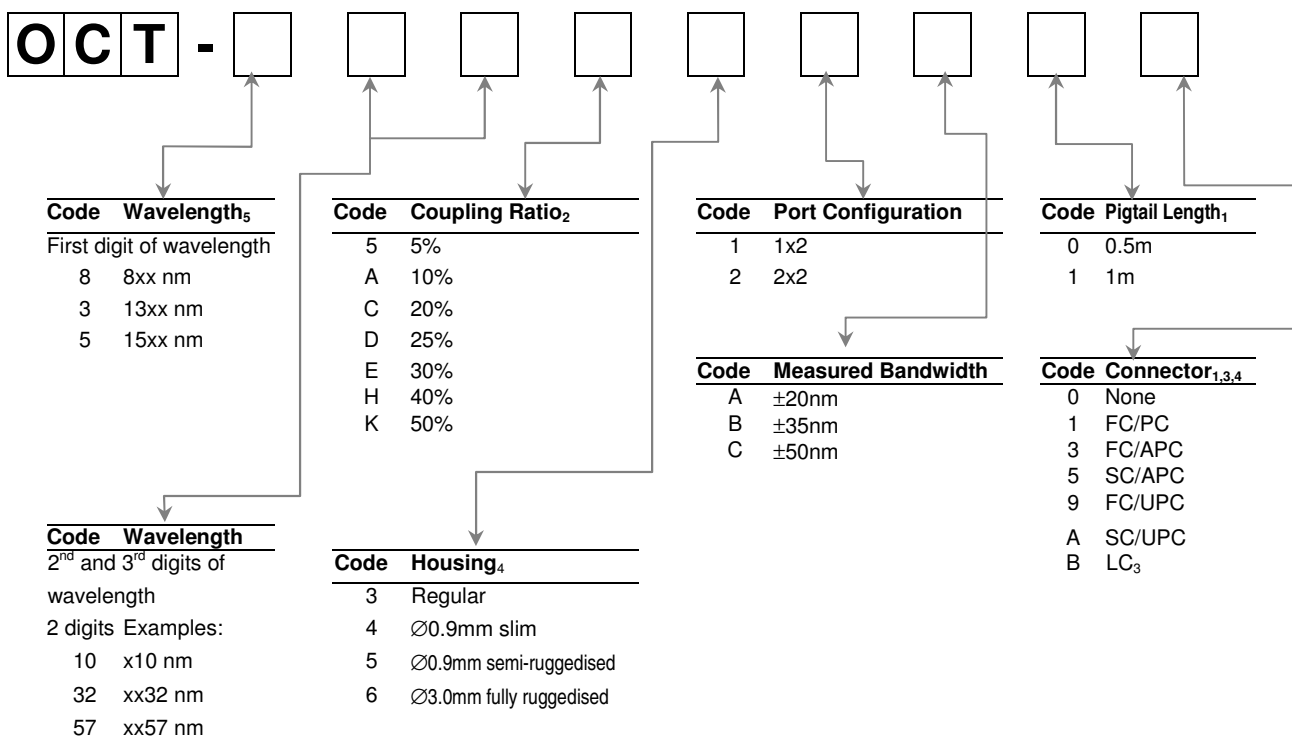
Configuration



Ordering Code Information

OCT-820K31A10 (OCT Wideband Coupler, 820nm centre wavelength, 50/50 coupling ratio, regular housing, 1x2 port configuration, ±20nm measured bandwidth, 1m pigtails, no connectors)

OCT-310D52C13 (OCT Wideband Coupler, 1310nm centre wavelength, 75/25 coupling ratio, 0.9mm loose tube semi-ruggedised housing, 2x2 port configuration, ±50nm measured bandwidth, 1m pigtails, FC/APC connectors)



1. Minimum pigtail length. Further pigtail lengths available on request. Where connectorised, pigtail length is to connector end face.
2. Any coupling ratio available. Please contact G&H for ordering codes of coupling ratios not listed.
3. LC connector not available for housing code 6, fully ruggedised housing.
4. Connectors may be fitted to housing types 4, 5 and 6. For connectorisation of housing type 3 please contact the sales office.
5. Various fibre options available. Please contact sales officer to discuss fibre choice.