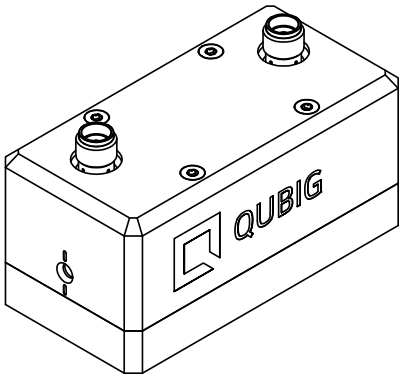
QUBIG

Empowering Laser Technologies

Test Data Sheet

TWP2L2HP-SWIR1
SN22.0179
Free-space traveling-wave broadband electro-optic phase modulator -High-RF power

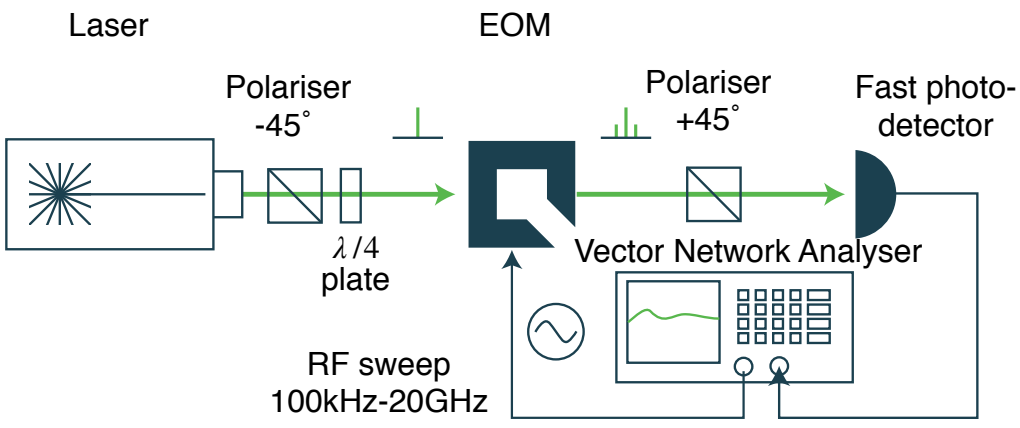


RF properties	Value	Unit
Max RF power(1)	55	dBm

Optical properties		
Aperture	2.2 x 1.95	mm^2
Wavefront distortion (633nm)	< λ/6	nm
Recommended optical intensity (1550nm)	< 10	W/mm^2
AR coating (R<0.5%)	1000 - 1700	nm
Modulation bandwidth	>1.5	GHz

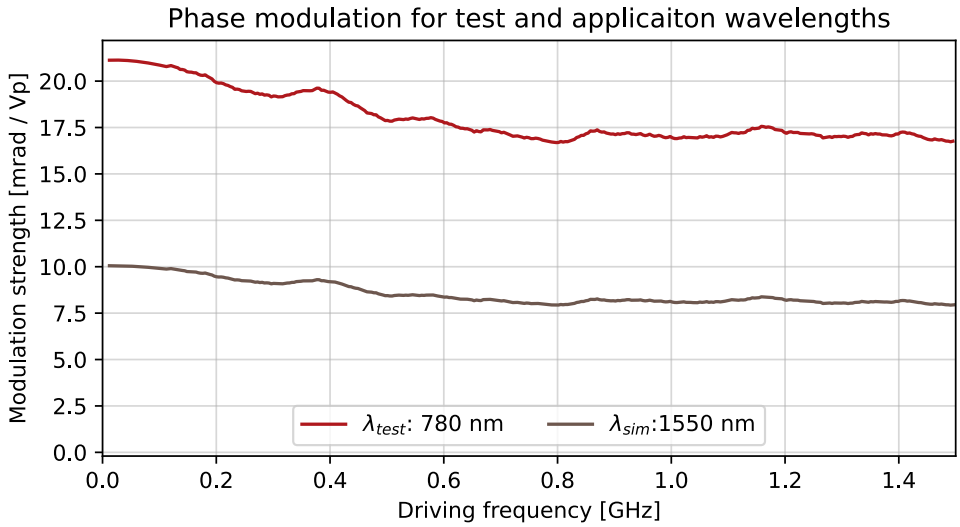
1) Use of a proper heatsink and water cooling is recommended

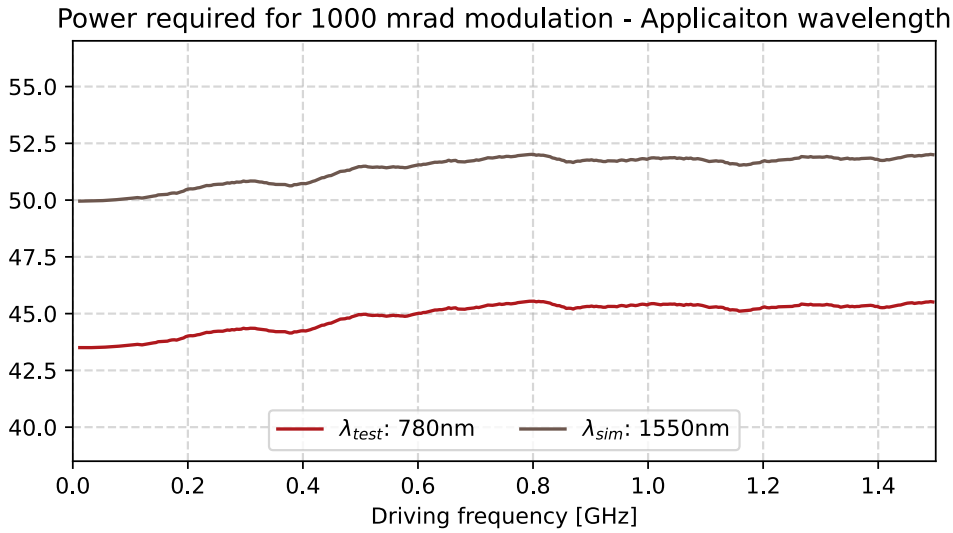
Measured modulation



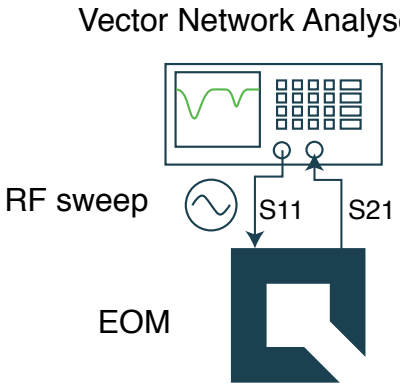
Test setup

Phase-modulation efficiency

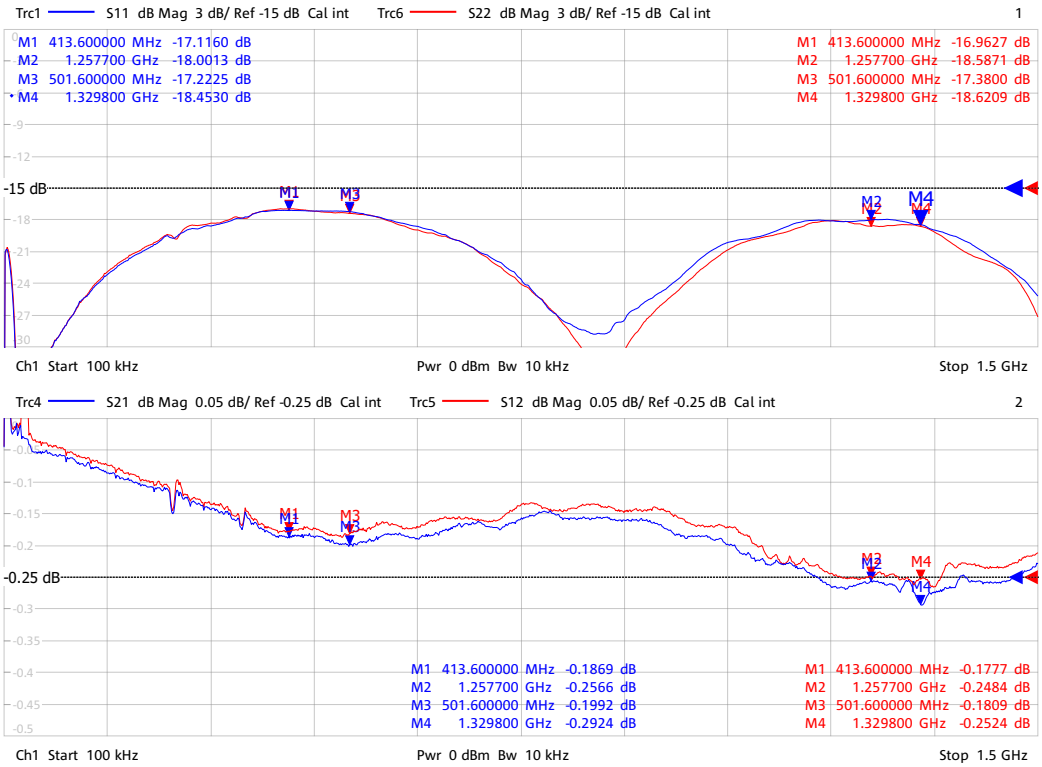




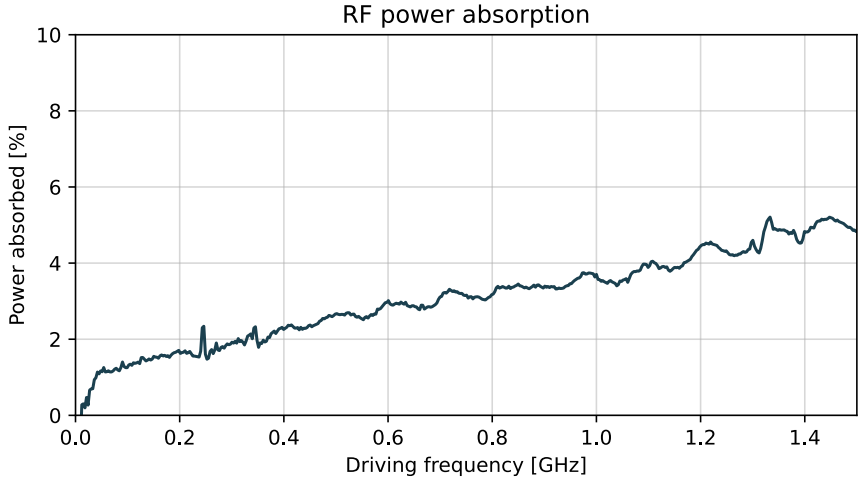
S parameters



Test setup

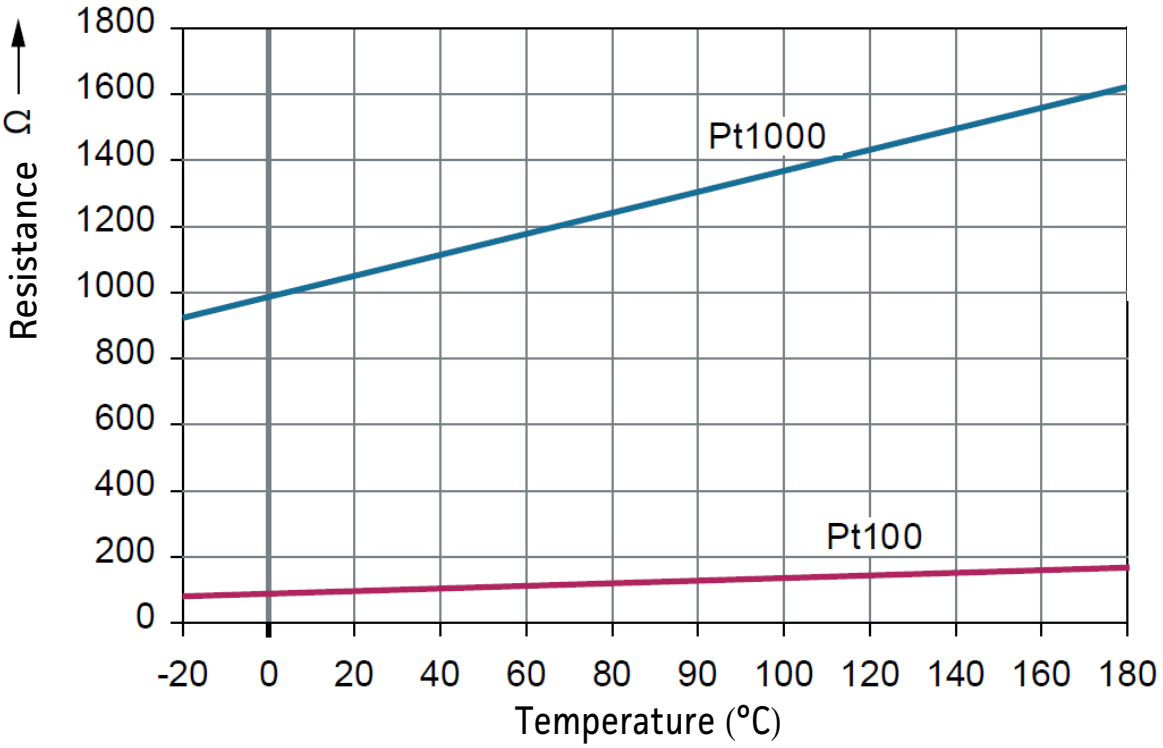


RF absorption



Temperature control option information

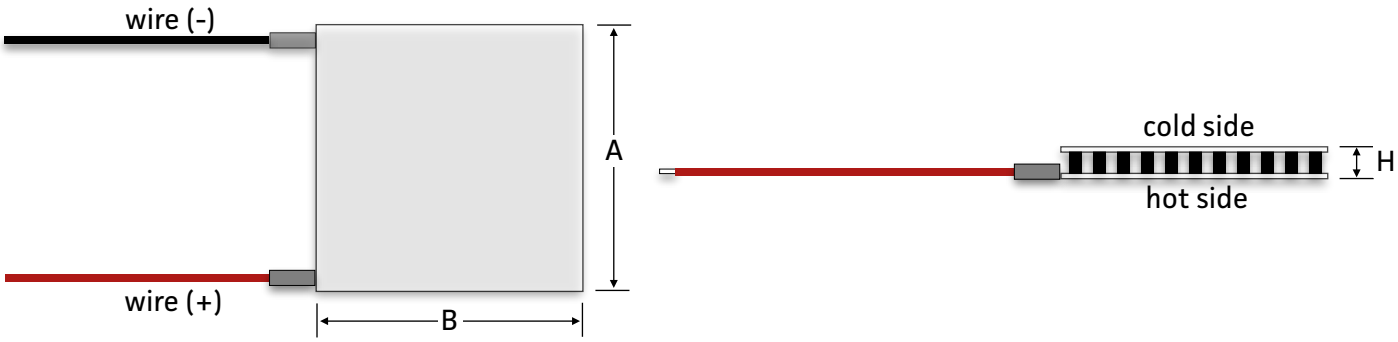
Pt1000 characteristics:



Temp. (°C)	Resistance (Ω)
-40	842.71
-35	862.48
-30	882.22
-25	901.92
-20	921.6
-15	941.24
-10	960.6
-5	980.44
0	1000
5	1019.53
10	1039.03
15	1058.49
20	1077.94
25	1097.35
30	1116.73
35	1136.08
40	1155.41
45	1178.56
50	1193.97
55	1213.21
60	1232.42
65	1251.6
70	1270.75
75	1289.87
80	1308.97
85	1328.03
90	1347.07
95	1366.08
100	1385.06
105	1404
110	1422.93
115	1441.82
120	1460.68
125	1479.51

TEC characteristics:

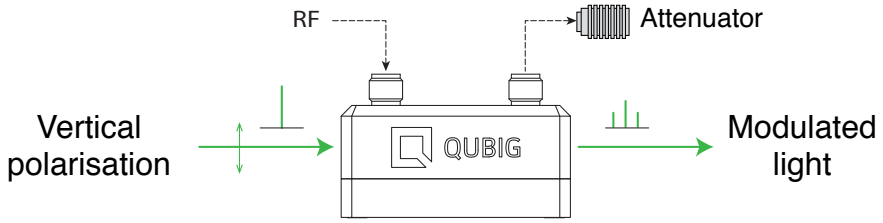
TEC part number	Imax (A)	Umax (V)	Qcmax (W)	ΔTmax (K)	Tmax (°C)	A (mm)	B (mm)	H (mm)
PM-30X30-36	3.3	14.0	34	66	138	30	30	3.3



Handling instructions

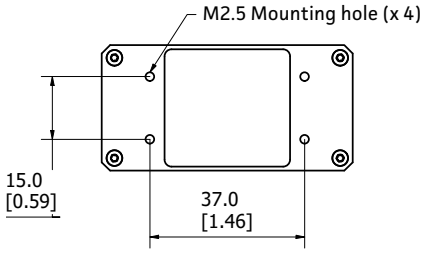
- Input laser polarisation must be aligned with respect to the white markers on the housing
- Radio frequency signal must propagate in the same direction as the light beam.
- An attenuator must be used at the RF-out port.
- Please handle device carefully. Avoid shock. Don't drop.
- Slight angle adjustment can reduce unwanted residual amplitude modulation (RAM)

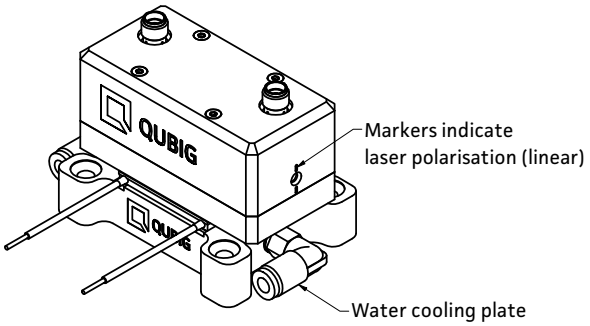
Operation configuration

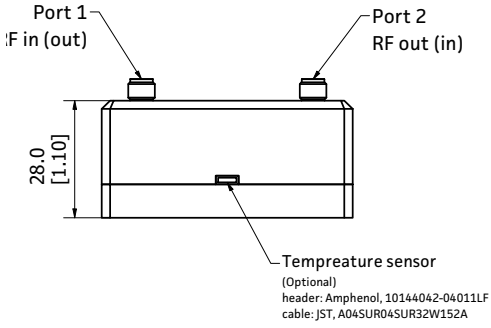


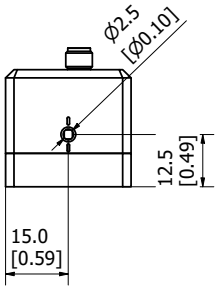
The use of a long coaxial cable between the EOM and the RF attenuator is recommended to avoid heating the modulator

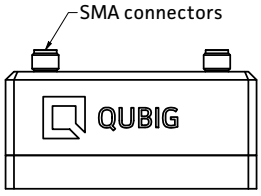
Package drawing

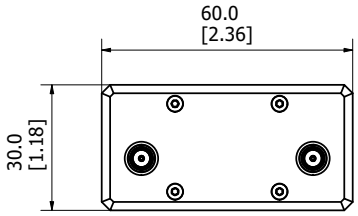












All units in mm [inches]

Tested by:

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