

Product Overview

These standard versions are designed for short cavities, with their optical length of 32 mm. Made of crystal quartz for linearly polarized lasers, they can be proposed with two different carrier frequencies 40.68MHz and 80MHz in order to fit to all kind of cavities. The hard coating with low reflectivity and high quality materials assures a high damage threshold > 500 MW/cm².



Features

- Linear Polarization
- 1064 nm design
- Cooling by Conduction through baseplate

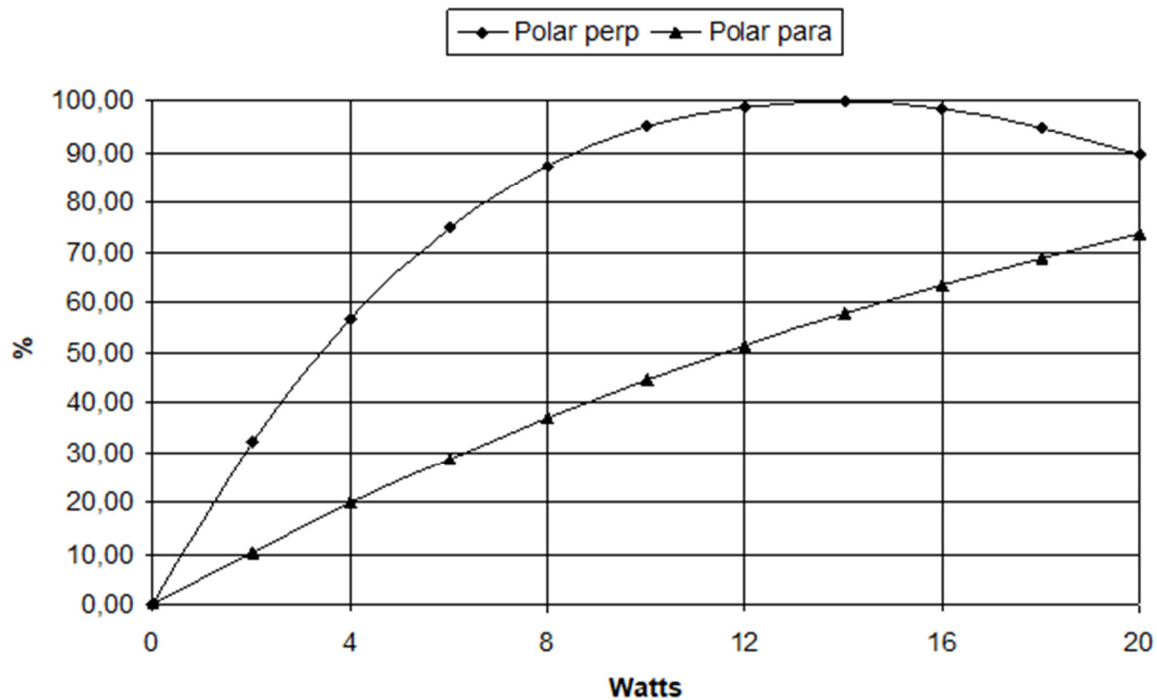
	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		Quartz [L] – 5740 m/s		
Optical Wavelength range (AR coated) (λ)	nm	1030	1064	1080
Transmission	%		99.6	
Input / Output Polarization		Linear Vertical (⊥)		
Operation order		0 th order / Bragg incidence		
Rise/fall time	ns/mm		115	
Max optical peak power density	MW/cm ²		>500	
Input impedance	Ω		50	
V.S.W.R.			< 1.2:1	
Connector/ cable length		SMA female/ 6 cm		
Size	mm ³	33 x 36.5 x 25.8		
Weight	g	30		
Packaging		IN PRO 181		
Operating Temperature (non condensing)	°C	+10	+25	+40
Heat Exchange		Conduction through baseplate		
Storage Temperature (non condensing)	°C	-40	+20	+65
RoHS Compliance		Yes		
OPTIONS		Cable length on request (10, 15, 20, 25cm...) Connector on request (SMA 90°, BNC...)		

Model		QCQ40-A1.5-L1064-Z32	QCQ80-A1.2-L1064-Z32
Carrier Frequency / Frequency shift	MHz	40.68	80
Active Aperture	mm ²	1.5 x 1.5	1.2 x 1.2
Separation Angle (0-1)	mrd	7.5 @1064nm	14.8 @1064nm
Losses in 0 th order (η)*	%	nom 85	nom 85
RF Power (P)	W	nom 15 (≤18W)	nom 15 (≤18W)

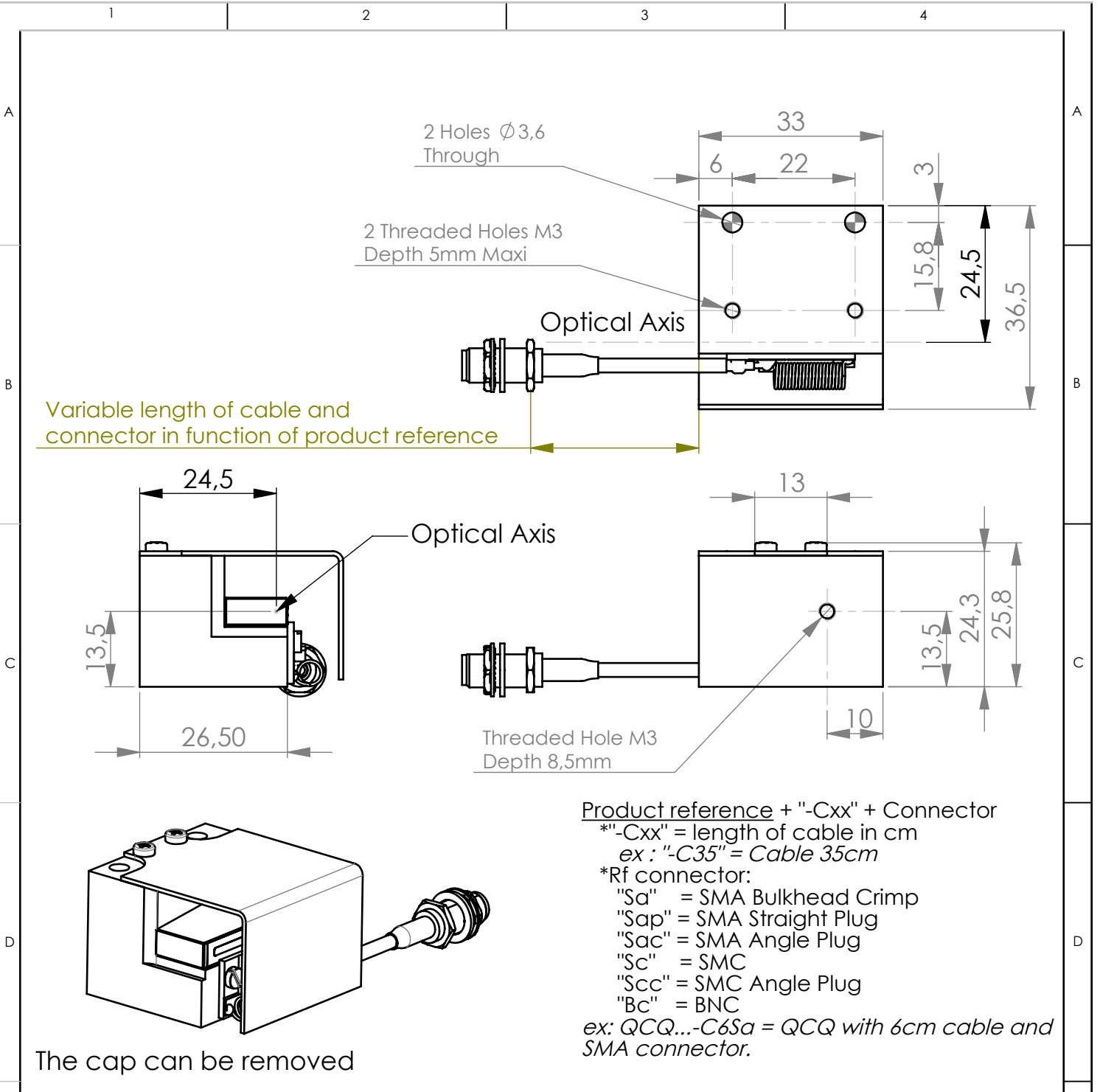
$$T_r = 0.66 \frac{\phi}{V} * F_{-3dB} = \frac{0.48}{T_r} * \Delta\theta = \frac{\lambda F}{V} * \frac{P_1}{P_2} = \frac{\lambda_1}{\lambda_2}$$

QCQ40-A1,5-L1064-Z32			QCQ80-A1,2-L1064-Z32		
Beam Diameter	Rise / Fall Time	Max AO Rep Rate	Beam Diameter	Rise / Fall Time	Max AO Rep Rate
mm (1/e ²)	ns	MHz	mm (1/e ²)	ns	MHz
0,6	69	2,3	0,4	46	3,5
0,7	80	2,0	0,5	57	2,8
0,8	92	1,7	0,6	69	2,3
0,9	103	1,5	0,7	80	2,0
1	115	1,4	0,8	92	1,7
1,1	126	1,3	0,9	103	1,5
1,2	138	1,2	1	115	1,4
1,3	149	1,1	xxx	xxx	xx


Normalized AO effic vs Pac



***Note:** losses depend on polarization state, input beam quality (M^2), beam diameter inside Q-switch and alignment.



E	02/10/17	G.M	Rajout cote manquante.
D	24/03/15	G.M	Rajout texte désignation "Sac".
C	24/01/11	G.M	Modification forme capot.
B	13/10/09	E.V	Modification référence cable
A	19/07/07	E.D	Plan initial / Initial Drawing

Indice Index	Date	Auteur Author	Modifications
Conception Design	E.D	PLAN D'INTERFACE / OUTLINE DRAWING Référence / Reference IN-PRO-181	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK	 OPTO-ELECTRONIC A.A. SA OPTO-ELECTRONIQUE DIVISION 18, rue Nicolas Appert F-91898 ORSAY tel : 08 11 09 76 76 fax : 01 76 91 50 31	
Echelle Scale	1:1		
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