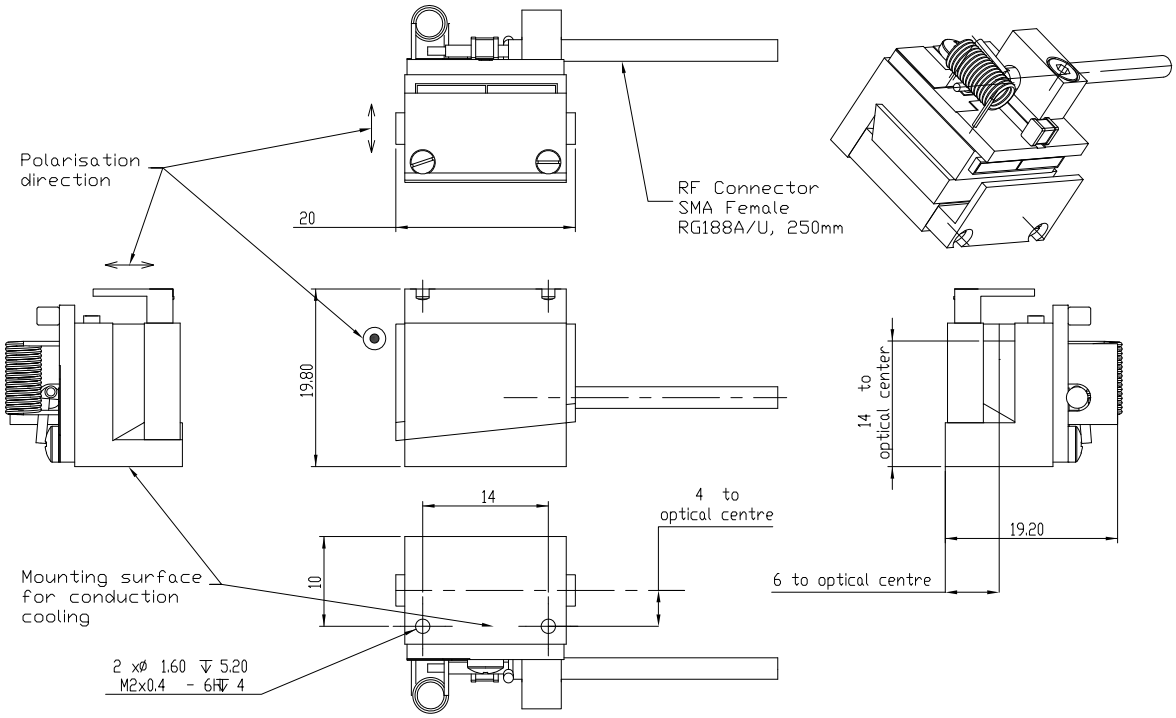
Gooch & Housego

新製品

LD励起固体レーザ用AO Qスイッチ（空冷(伝導冷却)方式）

I-QS080-1C10G-4-OS13 Specification:

Model No:	I-QS080-1C10G-4-OS13
Device:	AO Q-Switch
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Damage threshold:	> 1GW/cm^2
AR coating reflectivity:	< 0·2% per surface
Transmission:	> 99·6%
Frequency:	80MHz
Optical polarisation:	Linear, horizontal to mounting surface
Active aperture:	1.0mm
Acoustic mode:	Compressional
Separation angle:	14.9mrad
Rise-time (10-90%):	113ns/mm
Loss modulation:	≥ 85%
RF power:	10W (max)
Housing:	Refer to drawing



Revision No: 1.0
Date: 09/09/10

Enabling Optical Technologies

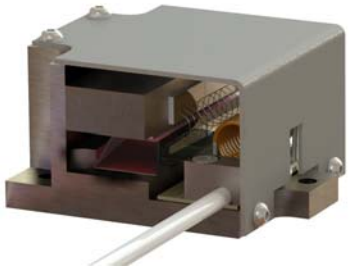
Gooch & Housego (UK) Ltd

Certificate No. FM 28257

光技術をサポートする
株式会社オプトサイエンス
http://www.optoscience.com

東京本社 〒160-0014 東京都新宿区内藤町１番地 内藤町ビルディング
TEL:03(3356)1064 FAX:03(3356)3466 E-mail:info@optoscience.com
大阪支店 〒532-0011 大阪市淀川区西中島7-7-2 新大阪ビル西館
TEL:06(6305)2064 FAX:06(6305)1030 E-mail:osk@optoscience.com
名古屋営業所 〒450-0002 名古屋市中村区名駅2-37-21 東海ソフトビル
TEL:052(569)6064 FAX:052(569)8064 E-mail:ngo@optoscience.com

Gooch & Housego



Conduction-cooled Acousto-Optic Q-Switch

I-QS041-1.8C10G-4-GH21

Former model number: QS041-10G-GH21

A compact conduction-cooled Acousto-Optic Q-Switch, ideally suited to end pumped Nd:YAG & Nd:YVO_4 lasers.

Utilising top grade Crystal Quartz for increased efficiency & thermal stability, with high quality optical finishing & high damage threshold anti-reflection coatings to provide high damage threshold & low insertion loss.

In addition to the specifications indicated, we also offer alternative wavelengths, RF frequencies, active apertures & a wide range of custom housing configurations. We also offer full custom design & manufacturing, enabling our customers to achieve the perfect solution.

Key Features:

Compact package
Conduction-cooled
High damage threshold
High efficiency
Custom configurations available

Applications:

Industrial (material processing):

- Laser Marking
- Engraving
- Drilling

General Specifications

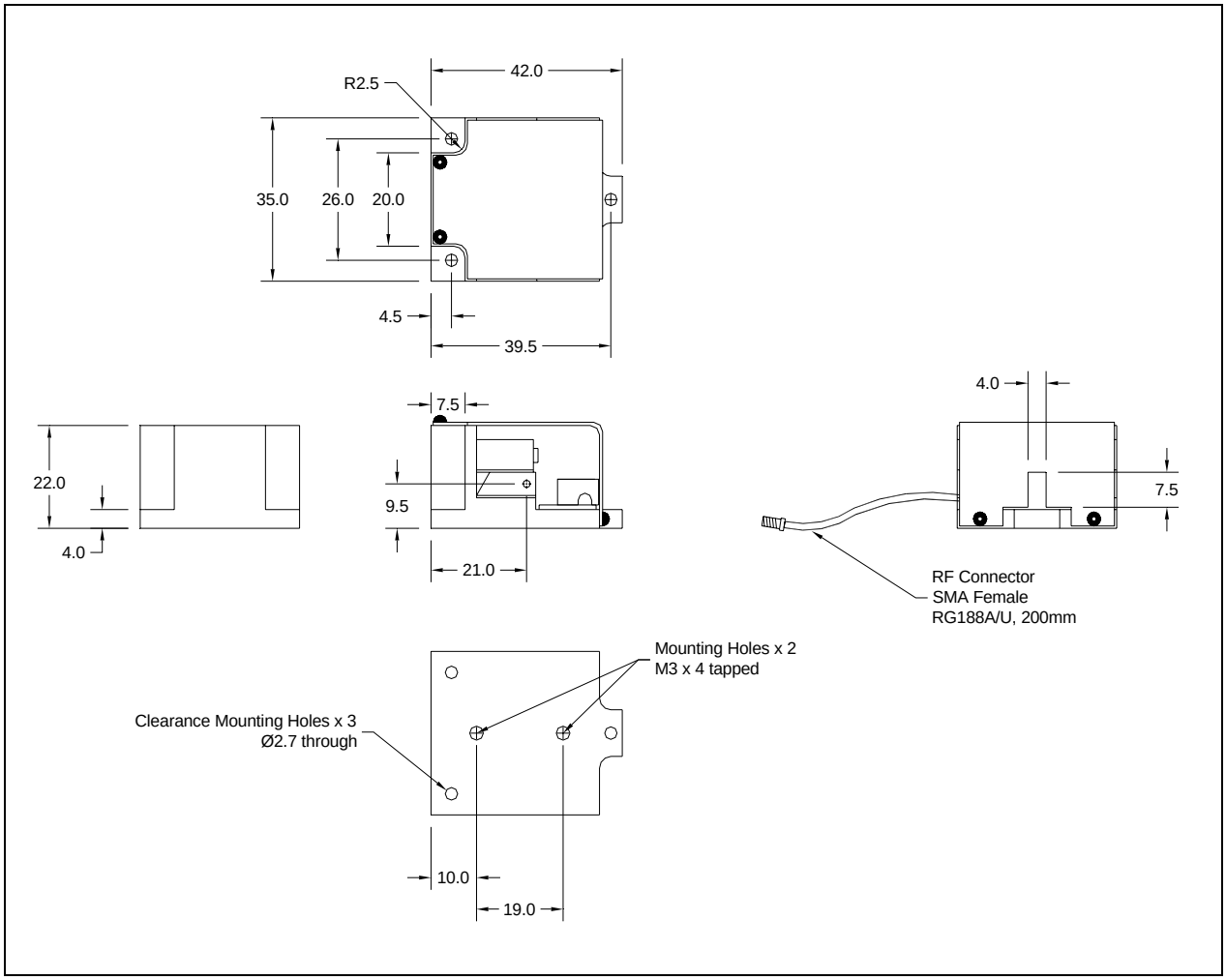
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Optical polarisation:	Linear, vertical to base
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm^{-2}
Transmission (single pass):	> 99.6%
RF frequency:	40.68MHz
VSWR:	< 1.2:1
Active aperture:	1.8mm
Rise-time:	113ns/mm
Loss modulation:	> 85%
RF power rating:	20W (max)

推奨RFドライバー：MQC041-20DC-ZZZ　RFドライバーのデータシートをご覧下さい。

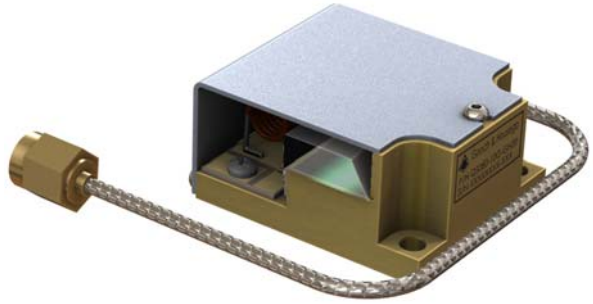
Ordering Code

Explanation: I-QS041-1.8C10G-4-GH21 (Q-Switch, 41MHz, 1.8mm active aperture, compressional mode, Crystal Quartz, 1064nm, SMA female pigtail, GH21 housing).

I	-	Q	S	0	4	1	-	1	.	8	C	1	0	G	-	4	-	G	H	2	1



Gooch & Housego



‘Low out-gassing’ Acousto-Optic Q-Switch

I-QS080-0.8C10G-8-GH20

Former model number: QS080-10G-GH20

Gooch & Housego brings aerospace technology to industrial laser applications.

Using proprietary manufacturing techniques, this new low out-gassing technology platform is ideally suited to applications where UV radiation is generated intra-cavity, such as frequency tripled, end pumped Nd:YVO_4 & Nd:YAG lasers.

Combining Crystal Quartz for improved efficiency & thermal stability with high quality optical finishing and in-house anti-reflection coatings, this Q-Switch exhibits very low insertion loss and high damage threshold.

In addition to the standard product shown, custom configurations are available for specialised applications. These include alternative housing options, wavelengths and RF frequencies.

Key Features:

Low out-gassing construction
Compact package
High damage threshold
Ideal for frequency tripled lasers
Custom configurations available

Applications:

Industrial:

- Material processing in UV

Aerospace

Space

General Specifications

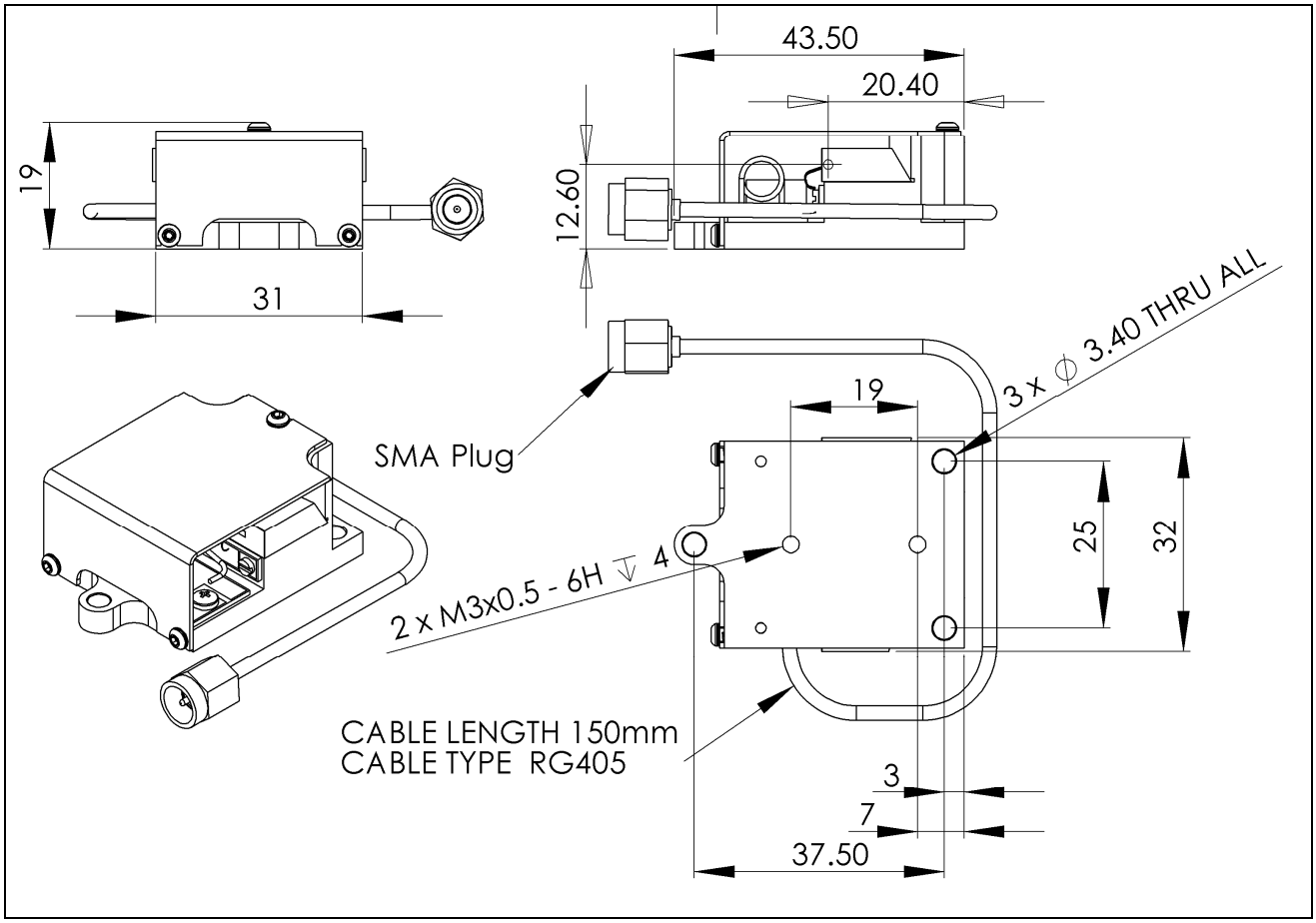
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Optical polarisation:	Linear, vertical to base
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm^{-2}
Transmission (single pass):	> 99.6%
RF frequency:	80MHz
VSWR:	< 1.2:1
Active aperture:	0.8mm
Rise-time:	113ns/mm
Loss modulation:	≥ 80%
RF power rating:	7W (max)

推奨RFドライバー：MQC080-7DC-ZZZ　RFドライバーのデータシートをご覧下さい。

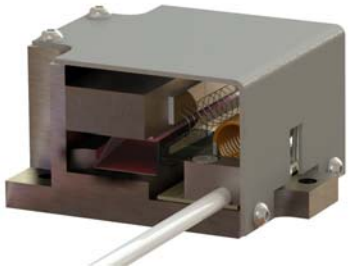
Ordering Code

Explanation: I-QS080-0.8C10G-5-GH20 (Q-Switch, 80MHz, 0.8mm active aperture, compressional mode, crystal quartz, 1064nm, SMA male pigtail, GH20 housing)

I	-	Q	S	0	8	0	-	0	.	8	C	1	0	G	-	8	-	G	H	2	0



Gooch & Housego



Conduction-cooled Acousto-Optic Q-Switch

I-QS080-1C10G-4-GH25

Former model number: QS080-10G-GH25

A compact conduction-cooled Acousto-Optic Q-Switch, ideally suited to moderate power, short cavity end pumped Nd:YAG & Nd:YVO_4 lasers.

Utilising top grade Crystal Quartz for increased efficiency & thermal stability, with high quality optical finishing & high damage threshold anti-reflection coatings to provide high damage threshold & low insertion loss.

In addition to the specifications indicated, we also offer alternative wavelengths, RF frequencies, active apertures & a wide range of custom housing configurations. We also offer full custom design & manufacturing, enabling our customers to achieve the perfect solution.

Key Features:

Compact package
Conduction-cooled
High damage threshold
High efficiency
Custom configurations available

Applications:

Industrial (material processing):

- Laser Marking
- Engraving
- Drilling

General Specifications

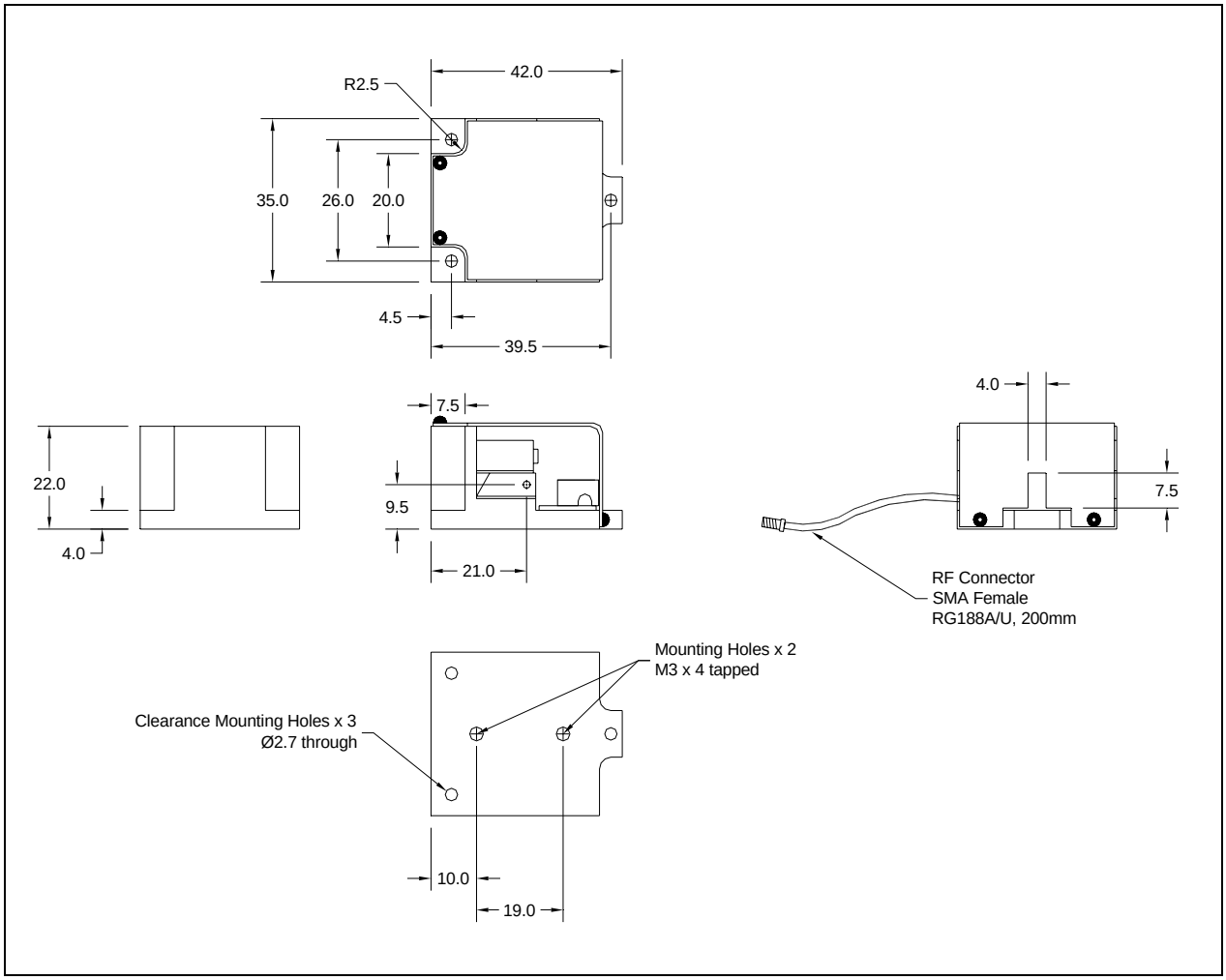
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Optical polarisation:	Linear, vertical to base
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm^{-2}
Transmission (single pass):	> 99.6%
RF frequency:	80MHz
VSWR:	< 1.2:1
Active aperture:	1.0mm
Rise-time:	113ns/mm
Loss modulation:	> 85%
RF power rating:	15W (max)

推奨RFドライバー：MQC080-15DC-ZZZ　RFドライバーのデータシートをご覧下さい。

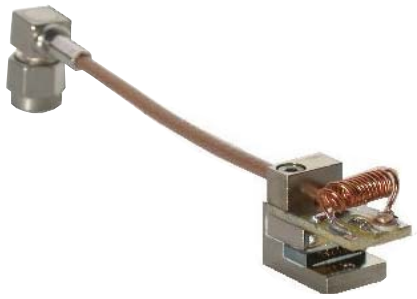
Ordering Code

Explanation: I-QS080-1C10G-4-GH25 (Q-Switch, 80MHz, 1mm active aperture, compressional mode, Crystal Quartz, 1064nm, SMA female pigtail, GH25 housing).

I	-	Q	S	0	8	0	-	1	C	1	0	G	-	4	-	G	H	2	5



Gooch & Housego



Ultra compact Conduction-cooled Acousto-Optic Q-Switch

I-QS080-1C2G-E-3D1

Former model number: QS080-2G-3D1

An ultra compact conduction-cooled Acousto-Optic Q-Switch, ideally suited to short cavity, short pulse, low power DPSS lasers.

Utilising a highly efficient crystalline interaction material, greater than 85% loss modulation can be achieved without the need for active cooling.

Operating at 80MHz, the diffracted beam is sufficiently separated for most short cavities.

We also offer full custom design and manufacturing, enabling our customers to achieve the perfect solution. Our dedicated team of engineers and scientists are ready to assist you.

Key Features:

- Ultra compact package
- Conduction-cooled
- Polarisation insensitive
- High efficiency
- Custom configurations available

General Specifications

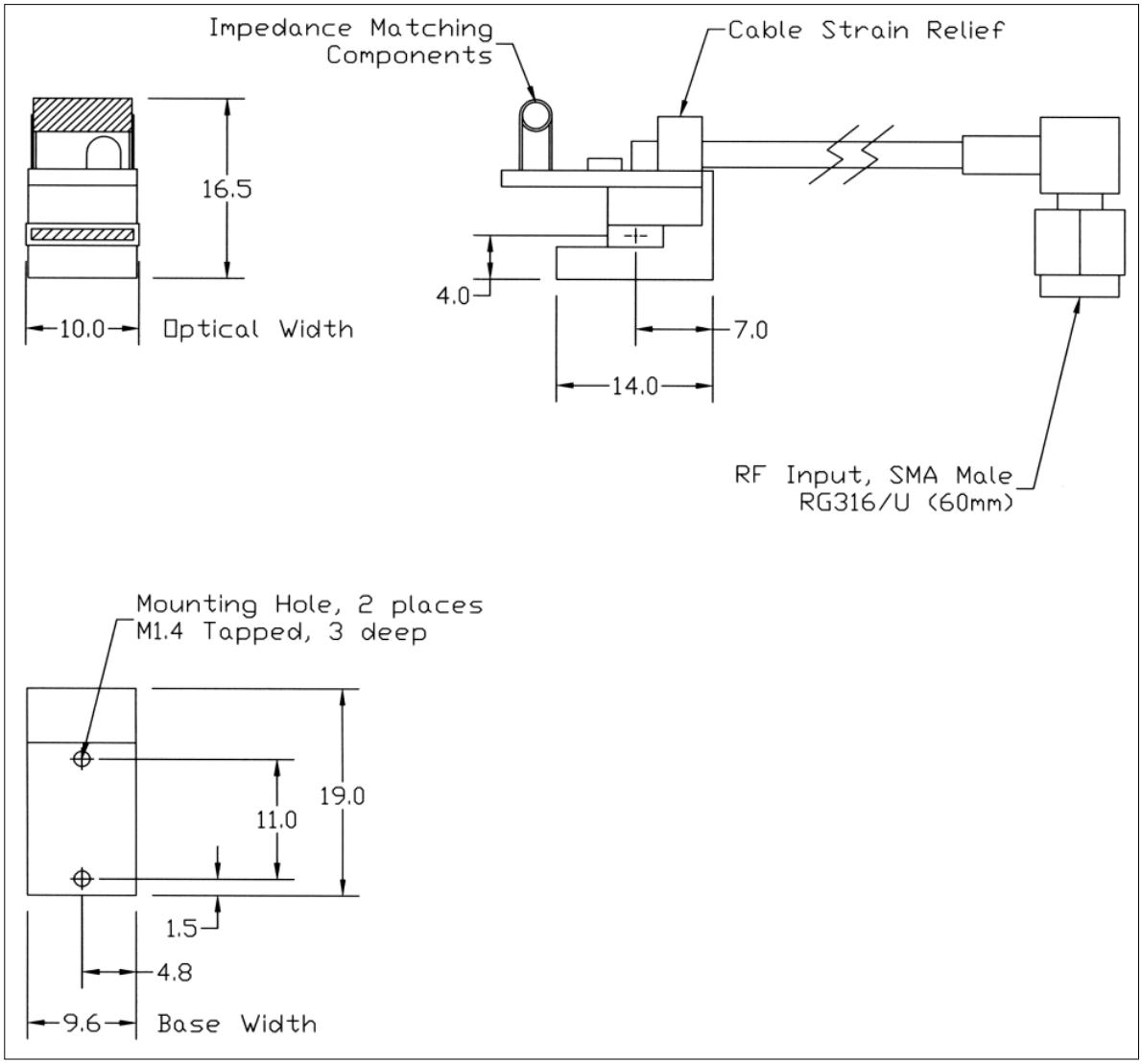
Interaction material:	Tellurium Dioxide
Wavelength:	1047 - 1064nm
Optical polarisation:	Insensitive
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 50MWcm^{-2} (assuming a pulse width of ~ 10ns)
Transmission (single pass):	> 99.5%
RF frequency:	80MHz
VSWR:	< 1.2:1
Active aperture:	1.0mm
Clear aperture:	1.4mm
Rise-time:	153ns/mm
Loss modulation:	> 85%
RF power rating:	3W (max)
Beam separation:	20mrad
Acceptance angle (full):	12mrad
Cooling:	Conduction through base

推奨RFドライバー：MQC080-3DC-ZZZ　RFドライバーのデータシートをご覧下さい。

Ordering Code

Explanation: I-QS080-1C2G-E-3D1 (Q-Switch, 80MHz, 1.0mm active aperture, compressional mode, Tellurium Dioxide, 1064nm, SMA right angle male pigtail, 3D1 housing).

I	-	Q	S	0	8	0	-	1	C	2	G	-	E	-	3	D	1



Gooch & Housego

Device Specifications

Model Numbers:

33041-XQ-SMA
33041-XQ-BNC

(Protected Under Us Patent Number 5,268,911)

Document Number: 56A15803C

PARAMETER	SPECIFICATION
Interaction Material	Crystal Quartz
Acoustic Mode	Longitudinal
Operating Wavelength	1.06 µm
Window Configuration	AR "V" coated
Static Transmission	>99 %
Operating Frequency	40.68 MHz
Loss Modulation	> 80 % with linear polarized light perpendicular to acoustic propagation
Acoustic Aperture Size	0.7 mm
Rise Time	< 115 nsec/mm beam dia.
Deflection Angle	7.5 mrad
RF Power Level	< 16 watts
Impedance	50 ohms nominal
VSWR	< 1.2:1 @ 40.68 MHz
Package BNC SMA	53B3537 53B3538
Cooling	Conduction, housing must remain below 50°C

推奨RFドライバー：MQC041-16DC-ZZZ　RFドライバーのデータシートをご覧下さい。

Options: *** = PPK, FPS, A05, R05

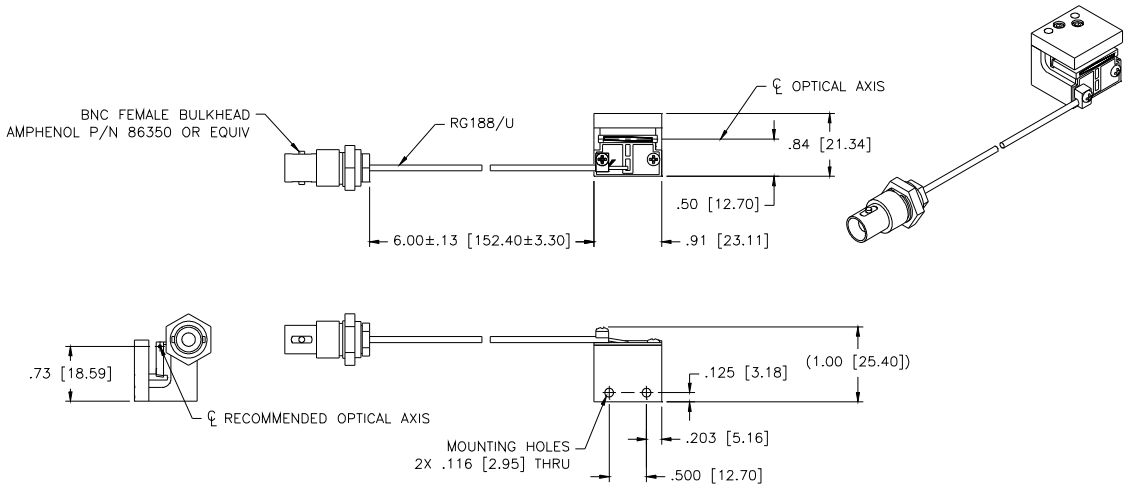
For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

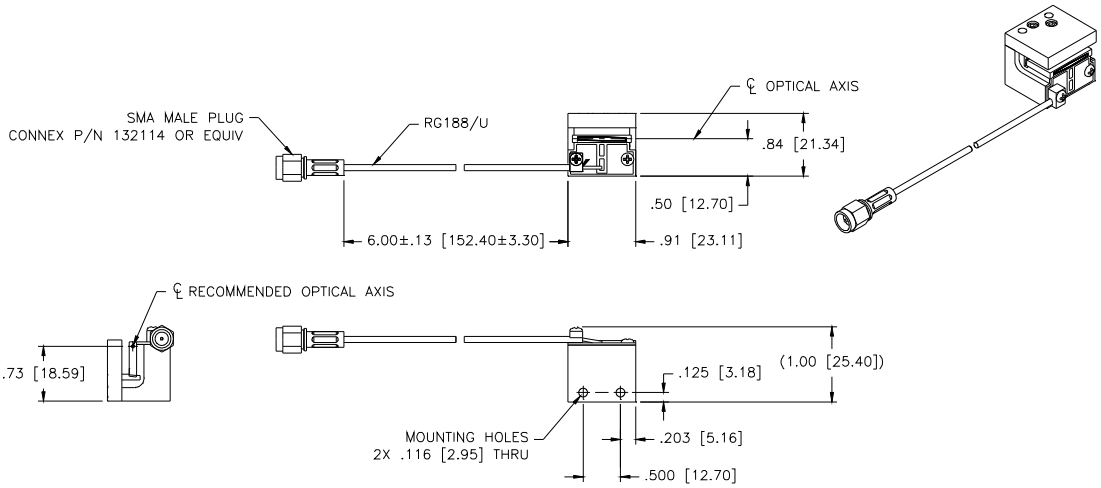
As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Mechanical Dimensions:

Dimensions in inches and [mm]

Gooch & Housego





For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Gooch & Housego

DEVICE SPECIFICATIONS

MODEL NUMBER:

33080-XQ-SMA
33080-XQ-BNC

(Protected Under US patent number 5,268,911)

DOCUMENT NUMBER: 56A20091

PARAMETER	SPECIFICATION
Interaction Material	Crystal Quartz
Acoustic Mode	Longitudinal
Operating Wavelength	1.06 µm
Window Configuration	AR "V" coated
Static Transmission	>99%
Operating Frequency	80 MHz
Loss Modulation	>80% with polarized light perpendicular to acoustic propagation
Acoustic Aperture Size	0.7 mm
Rise Time	< 115 nsec/mm beam dia.
Deflection Angle	14.7 mrad
RF Power Level	< 16 watts
Impedance	50 ohms nominal
VSWR	<1.2:1 @ 80 MHz
Package: BNC SMA	53B3537 53B3538
Cooling	Conduction, housing must remain below 50°C

推奨RFドライバー：MQC080-16DC-ZZZ　RFドライバーのデータシートをご覧下さい。

Options: ***=PPK, FPS, A05, R05

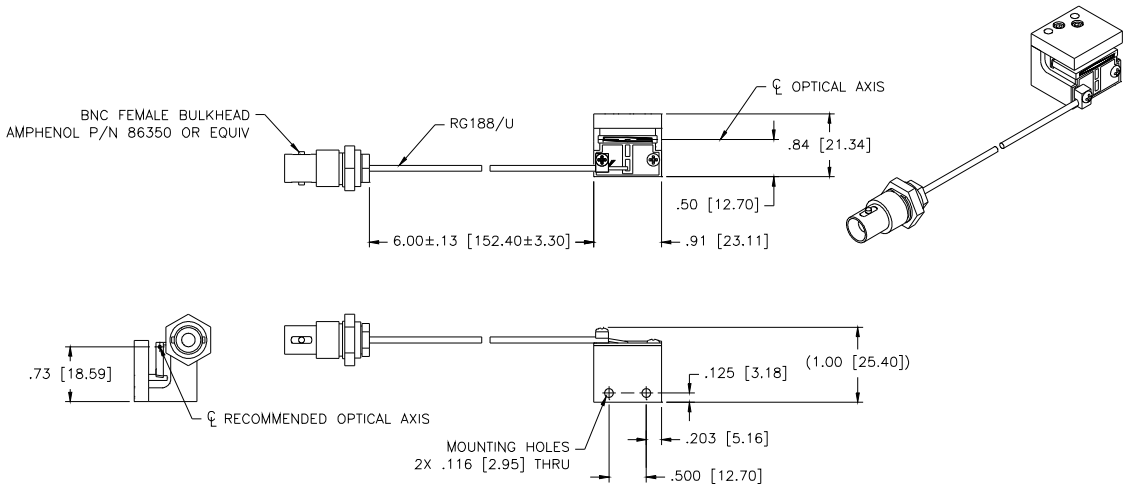
For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

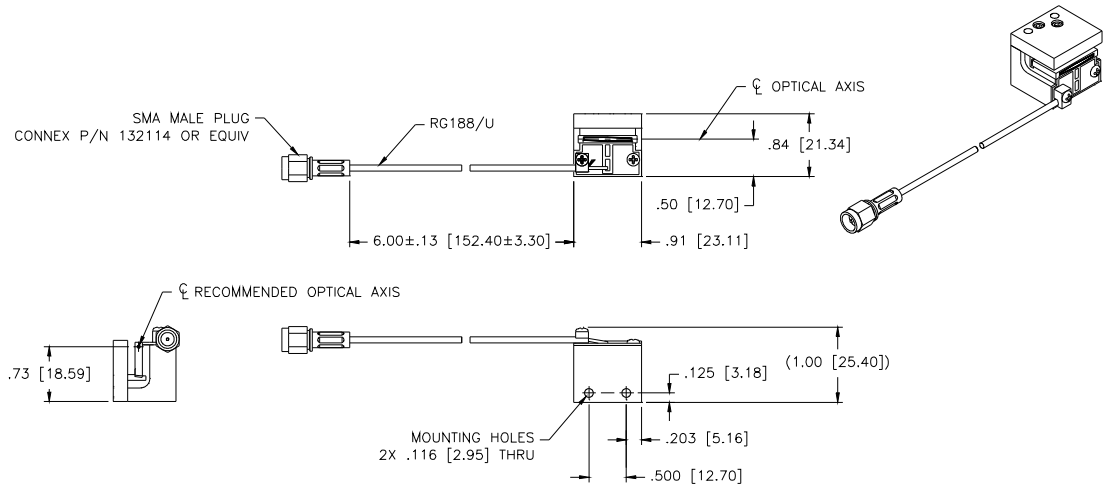
As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Mechanical Dimensions:

Dimensions in inches and [mm]

Gooch & Housego





For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Gooch & Housego

DEVICE SPECIFICATIONS

MODEL NUMBER:

34027-1.5-SF10-BNC
34027-1.5-SF10-SMF

DOCUMENT NUMBER: 56A8689F

PARAMETER	SPECIFICATION
Interactive Material	SF10
Acoustic Mode	Longitudinal
Operating Wavelength	1064 nm
Window Configuration	AR Coated
Static Transmission	>99 %
Operating Frequency	27.12 MHz
Loss Modulation	>30 % @ 2 watts >60 % @ 4 watts
Light Polarization	Random
Acoustic Aperture Size	1.5 mm
Rise Time	165 nsec / mm beam diameter
Deflection Angle	7.6 mrad
Maximum RF Power Level	4 watts
Impedance	50 ohms
VSWR	<1.5:1 @ 27.12 MHz
Package: BNC SMF	53B3535 53B3534

Conductive Cooling required: Package must be maintained below 50^0C.

Operating Manual:	Use Latest Revision.	51A18693
Acceptance Test Procedure:		42A12401
Acceptance Test Results form:		52A11835

New RF Driver Model No.

推奨RFドライバー：MQC027-04DC-ZZZ　RFドライバーのデータシートをご覧下さい。

Control Options: *** = PPK, FPS, A05, R05

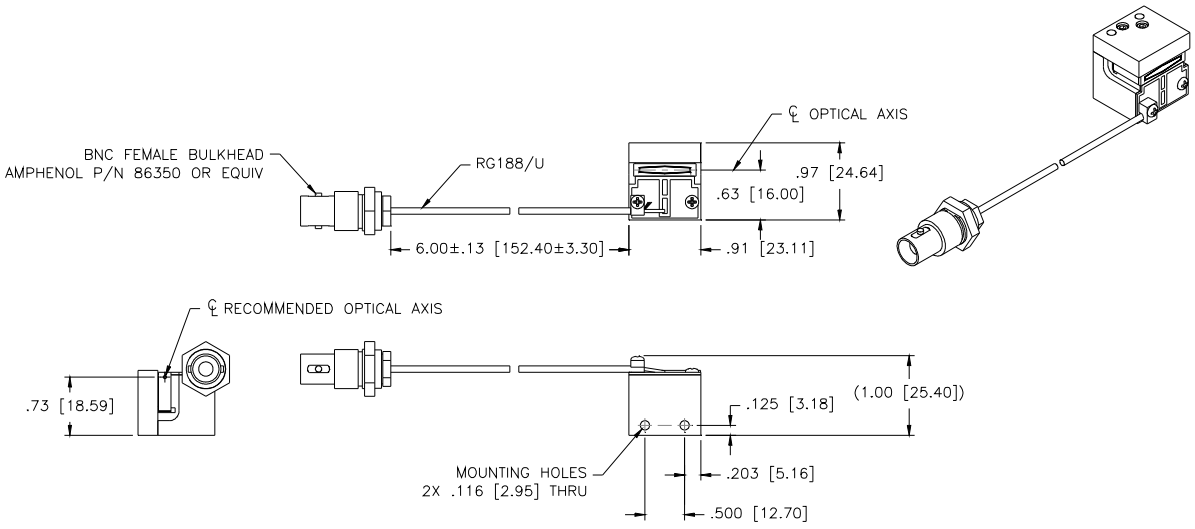
For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

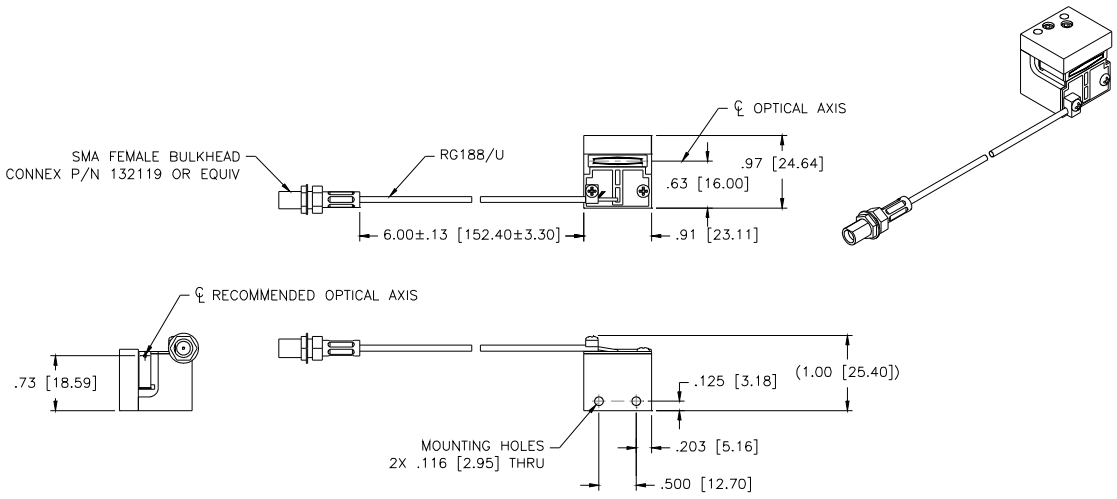
As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Mechanical Dimensions:

Dimensions in inches and [mm]

Gooch & Housego





For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Gooch & Housego

DEVICE SPECIFICATIONS
MODEL NUMBER:

34041-1.5-SF10-SMF
34041-1.5-SF10-BNC

DOCUMENT NUMBER: 56A12014C

PARAMETER	SPECIFICATION
Interactive Material	SF10
Acoustic Mode	Longitudinal
Operating Wavelength	1064 nm
Window Configuration	AR Coated
Static Transmission	>99 %
Operating Frequency	40.68 MHz
Loss Modulation	>20 % @ 2 watts >40 % @ 4 watts
Light Polarization	Random
Acoustic Aperture Size	1.5 mm
Rise Time	165 nsec/mm beam diameter
Deflection Angle	10.8 mrad
Maximum RF Power Level	4 watts
Impedance	50 ohms
VSWR	<1.2:1 @ 40.68 MHz
Package: SMF Female BNC Female	53B3534 53B3535
Package must be maintained at a temperature below 50^0C.	
Operating Manual: Use Latest Revision.	51A12136
Acceptance Test Procedure	42A14790
Acceptance Test Results form:	52A11836

New RF Driver Model No.

推奨RFドライバー：MQC041-04DC-ZZZ　RFドライバーのデータシートをご覧下さい。

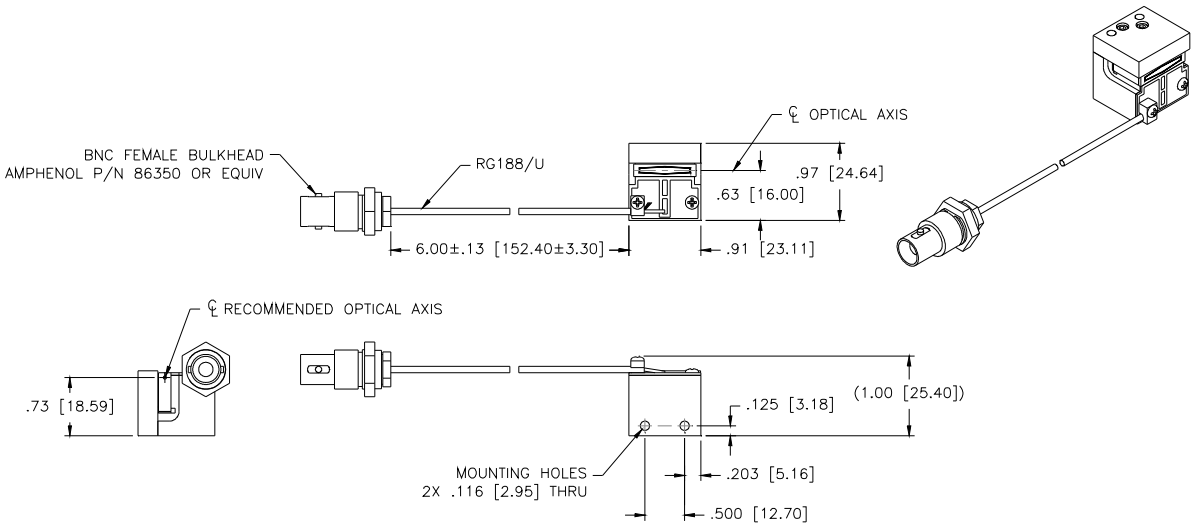
Options: *** = PPK, FPS, A05, R05

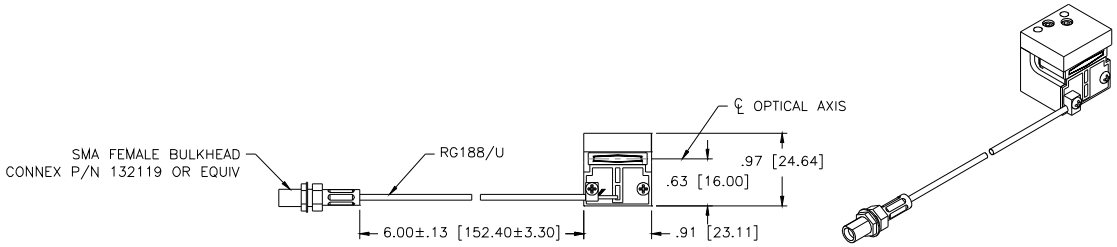
For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

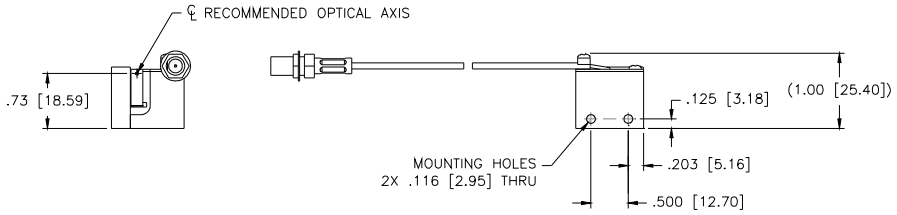
As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Mechanical Dimensions:

Dimensions in inches and [mm]







For More Information, Contact: Sales@GoochandHousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

Gooch & Housego

MODEL NUMBER:

34080-1-SF10-A

DOCUMENT NUMBER: 56A20304

PARAMETER	SPECIFICATION
Interaction Material	SF10
Acoustic Mode	Longitudinal
Operating Wavelength	1064 nm
Window Configuration	AR coated
Static Transmission	>99%
Operating Frequency	80 MHz
Loss Modulation	≥ 40% with random polarization
Acoustic Aperture Size	1 mm
Rise Time	162 nsec/mm beam diameter
Deflection Angle	21 mrad
Max RF Power Level	3.25 watts
Impedance	50 ohms nominal
VSWR	<1.2:1 @ 80 MHz
Package	53B4007
Cooling	Conductive, must maintain housing temperature <50ºC

New RF Driver Model No.

推奨RFドライバー：MQC080-03.25DC-ZZZ　RFドライバーのデータシートをご覧下さい。

For More Information, Contact: sales@goochandhousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.