

# D1365-aQ180-4 (266)

## Acousto-Optic Deflector

*Preliminary Data*



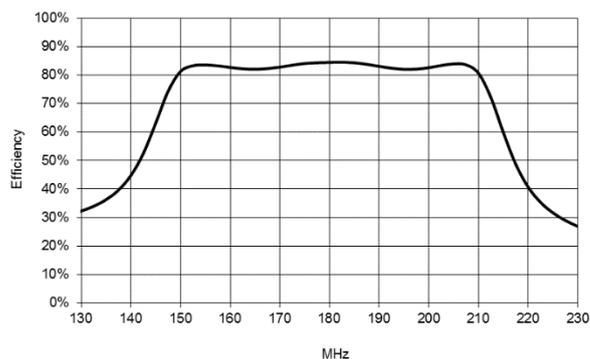
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Compact AO Deflector designed for use with 266nm laser. This device employs acoustic beam steering to improve the uniformity of the scan response. Applications include high speed, sequential multi-point scanning or fast sweep operation.

### SPECIFICATIONS

A/R Wavelengths:	0.266um
Optical Power:	10 Watts **
Interaction Medium:	Quartz
Acoustic Velocity:	5.7mm/ $\mu$ s
Centre Frequency (Fc):	180MHz (+/- 5% for best scan response)
RF Bandwidth:	60MHz, minimum
Input Impedance:	50 $\Omega$ Nominal
VSWR:	<1.5:1 @ Fc
Clear Aperture:	6.5mm
Active Aperture Height:	4mm (H) x 6mm (W)
Static Insertion Loss	<3% at 0.266um
Reflectivity:	< 0.5%/Surface
Laser Polarization:	Linear Vertical.
RF Power (total):	4 Watts nominal
Input Bragg Angle:	4.2 mrad
Separation angle at Fc:	8.4 mrad
Typical Scan Angle:	2.8 mrad
<u>Deflector Performance:</u>	Using 3.5 x 3.5mm beam
Total Efficiency	~80% across 60MHz scan
Access Time,	0.35 $\mu$ sec
Resolution:	35 <u>resolvable</u> spots >1000 non-resolvable points

### Estimated SCAN PERFORMANCE at 0.266um \*

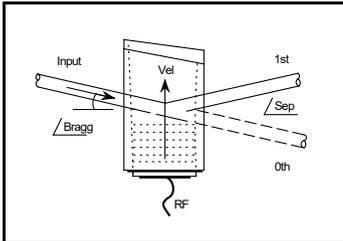


\* Single mode input

\*\* For higher powers please contact Isomet

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
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**Quality Assured.**  
**In-house: Crystal Growth,**  
**Optical Polishing,**  
**A/R coating, Vacuum Bonding**



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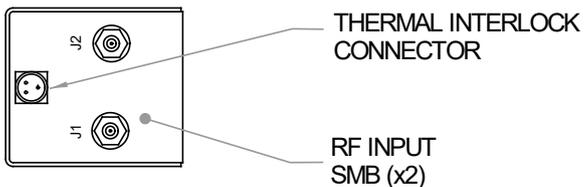
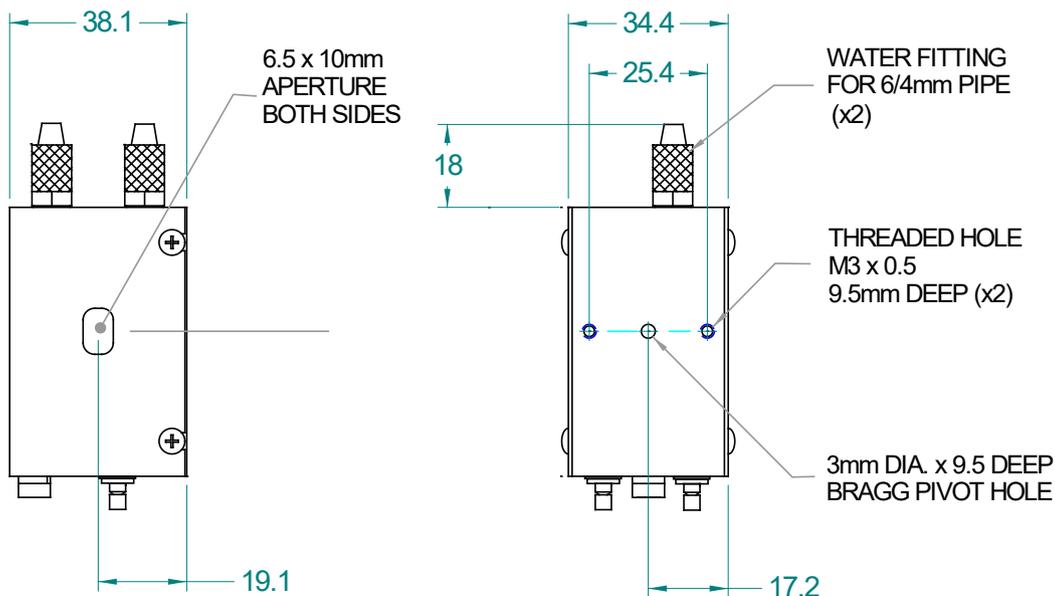
Preliminary Data



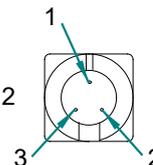
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### OUTLINE DRAWING

Dimensions: mm



Interlock Connector: 3-pin Snap  
Normally Closed Contacts : Pins 1 , 2  
Not connected : Pin 3



#### Cooling:

Optional water cooling  
All wet surfaces Tellurium copper.  
Corrosion inhibitor recommended.  
Thermal interlock switch opens at 40degC

**Refer application note AN1906 regarding Coolant Specification**

#### Recommended Driver

iMS4-P Synthesizer

RFA0180-2-4 Amplifier

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