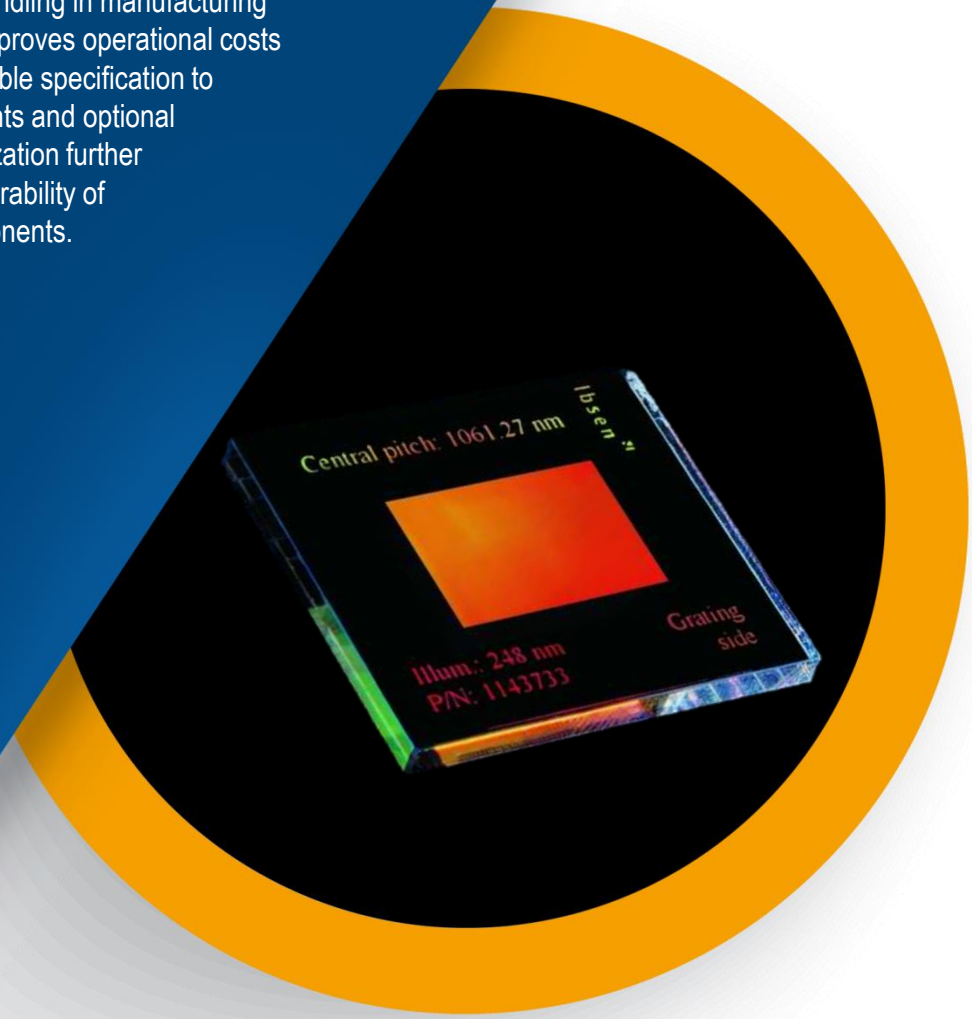
Improving manufacturability of gratings in fiber and waveguide based components through accuracy, characterization and on-mask identification

Ibsen photonics

Holographically produced Ibsen Phase masks offer period accuracy down to +/- 0.1 Ångström and enhance customer manufacturing performance and yield. Clear on-mask identification leads to straightforward handling in manufacturing and consequently improves operational costs for customers. A flexible specification to customer requirements and optional extensive characterization further enhances manufacturability of grating based components.



FBG Phase Mask

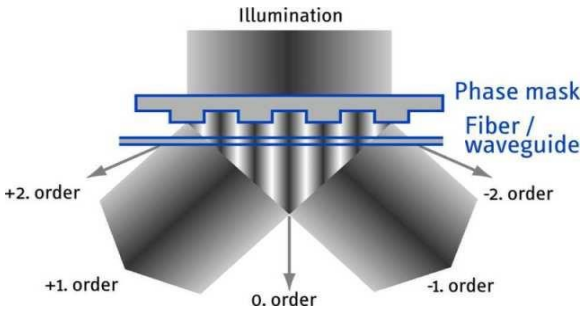
+1/-1 order principle

FBG Phase Mask

+1/-1 order principle

Features
Holographically produced in 100% cleanroom environment
Period accuracy and uniformity of +/- 0.01 nm
Continuous linear chirp
Low zero order
Low defect count
Clear on-mask identification

Applications
ITU filters and add/drop components
Fiber lasers
LD-stabilizers
Gain Flattening Filters
Dispersion Compensation
Sensors



The priciple behind +1/-1 order Phase mask

The +1/-1 order Phase mask is optimized to diffract light equally and maximally into the plus first and minus first orders. Self-interference between the two orders creates an interference pattern with half the Phase mask period. Ibsen manufactures a series of +1/-1 order Phase masks with highly suppressed zero order.

Product Range and Specifications		
Grating periods	260 nm – 2650 nm	
Illumination wavelengths	193 nm – 1065 nm	
Material	UV-grade Fused Silica	
Period accuracy	+/- 0.01 nm	
Period uniformity	+/- 0.01 nm	
Available chirp rates	0.01 nm/cm – 30 nm/cm*	
Guarenteed zero order suppression	<4%* (Lower spec. Optinal)	
Typical zero order suppression	0 – 2%*	
Zero order uniformity	Grating length 10 mm	+/- 0.5%*
	Grating length 25 mm	+/- 0.75%*
	Grating length 50 mm	+/- 1%*

Options

- Custom specifications
- Various characterization reports available

* Not applicable to all configurations across the product range

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For further information you can contact us directly at:

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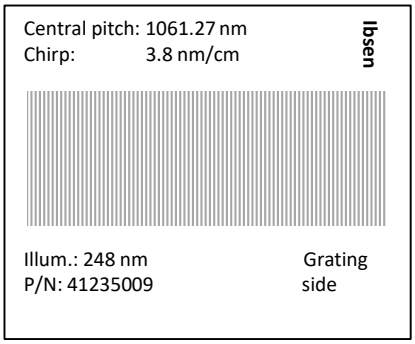
FBG Phase Mask

+1/-1 order principle

Standard grating and substrate sizes	
Grating size	Substrate size
10 mm x 10 mm	30 mm x 25 mm x 2 mm
25 mm x 10 mm	30 mm x 25 mm x 2 mm
50 mm x 10 mm	3” x 3” x 2 mm
Larger grating areas	Request for quote
Sawing to custom sizes	Optional



Ibsen offers cleaning service

Effective cleaning service can optinally include extensive cleanliness evaluation and diagnostic inspection.

Specifications are subject to change without prior notice.

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