amf

ADVANCED
MICRO
FOUNDRY

Your Ideal SiPh Foundry Partner

From Prototyping to Production

Located in Singapore
Serving you Worldwide

For more information
Please contact: sales@advmf.com

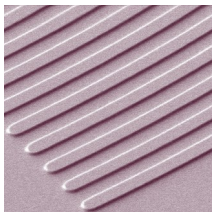
YOUR IDEAL FOUNDRY PARTNER

AMF is a leading commercial pure-play Silicon Photonics specialty foundry serving customers in various market segments including Telecommunication, Data Centres, LiDAR, Sensing, AR/VR, etc. We aim at becoming the de-facto Si Photonics foundry by providing best-in-class solutions supported by our proprietary IP and services from our team of Optical and Semiconductor experts who will work closely with you to support your project from concept to volume production.

Customer Concept → **Prototyping** **Volume Production**

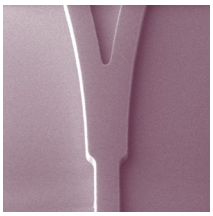
COMPREHENSIVE PDK

- Most comprehensive device library (ready to use device design blocks)
- PDK Support — Available on Luceda, Lumerical, Mentor, Synopsys, Cadence & KLayout platforms
- Optical, Electro-Optical & Opto-Electrical Testing Services

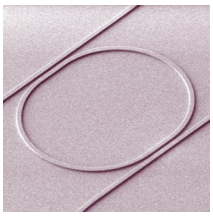


Grating Coupler

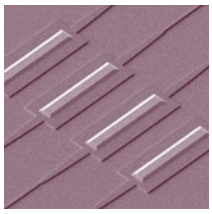
V-Groove



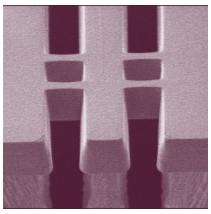
Splitter



High speed modulator



Ge Detector Array



Suspended Edge Coupler

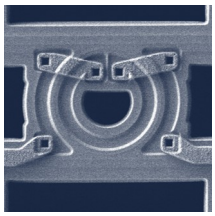
HIGH PERFORMANCE DEVICES

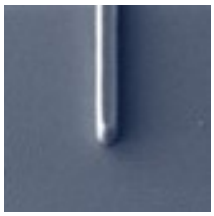
- Proprietary building blocks for high-bandwidth Photonics Integrated Circuits for 400Gbps and above
- 80+ PDK devices (O-Band, C-Band, L-Band, Visible) available for integration in customer layout
- Application & Wavelength specific PDK

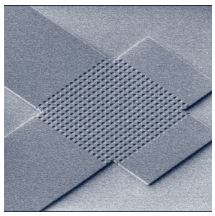
PDK Devices	Performance
Edge Coupler	TE: <1.4dB/facet TM: <1.4dB/facet
Grating Coupler	≈ 4dB/facet
1X2 MMI 2X2 MMI 2X4 MMI	≈0.15dB ≈0.18dB ≈0.5dB
Polarization Beam Rotator & Splitter	TE <0.1dB, TM <0.2dB PER ~19dB

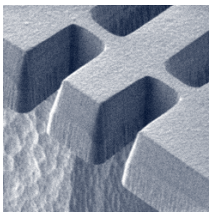
PDK Devices	Performance
O-Band, C-Band Ge Photodetector	BW: > 70GHz (C-Band), > 40GHz* (O-Band), R ~ 1A/W, Dark Current < 20nA
O-Band, C-Band High Speed MZM	EO BW> 40GHz 56GBaud
Thermal-Optical Phase Shifter	Power consumption <2 mW/Pπ
Crossing	<0.15dB, crosstalk <-40dB
APD	Please contact us for details

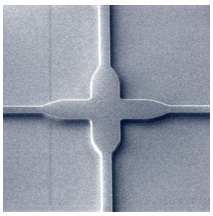
** O-band BW is limited by measurement tool capability*

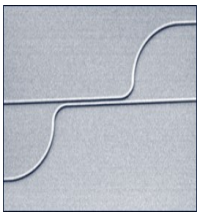








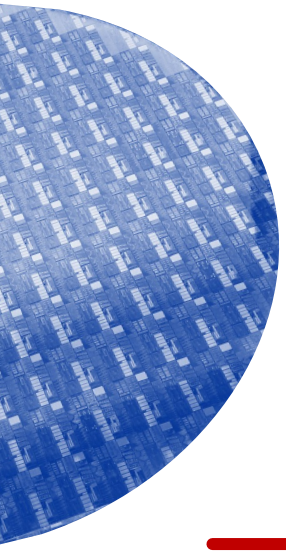




COMPREHENSIVE SERVICE OFFERINGS

MANUFACTURING SOLUTIONS

- 200mm wafer platform
- 5 Technology Platforms on SOI / Si / Glass Substates
- 90nm equivalent lithography for low loss WG
- Silicon Germanium & Germanium Epitaxy
- MEMS processes for Photonics integration solutions
- Dicing and backgrinding services
- Wafer Level Testing Services (Optical & Electrical)
- Comprehensive Defect Scanning
- Inline and Outgoing Quality Control



FLEXIBLE SERVICES & SUPPORT

AMF team has a proven track record for the past twenty years (since 2003) as the leading technology provider for Integrated Optics solutions. Through our newly upgraded cleanrooms, AMF also offers customized manufacturing services with competitive Cycle time, Quality and Reliability assurance

- Large Volume manufacturing services for product deployment
- Small Volume Prototyping services for product qualification
- MPW & Dedicated platforms for proof of concept

MULTIPLE SI PHOTONICS PLATFORMS

C-Band	• **Silicon-On-Insulator (SOI)**	Mature platform for multiple functional devices, such as High BW Modulators, Optical Phase Array, Optical Sensors, etc.
O-Band C-Band L-Band	• **SOI + SiN**	Material platform with low optical loss, which can integrate with Si and operate a wide range of wavelengths.
O-Band C-Band	• **SOI + SiN + Hybrid**	Advanced platform that integrates Thin Film Lithium Niobate and BTO on baseline platform for ultra high BW Modulation schemes beyond 800GHz, for communication products.
Visible	• **Si + SiN**	Material platform for ultra low loss passive discrete products in visible wavelengths, sensors and communication products.
Visible	• **Glass + SiN**	Platform to input, route and manipulate light typically in VIS spectrum, on a transparent substate. The system is well suited for applications requiring transparency (e.g. AR/VR).

AMF platforms support a wide range of applications

Telecom

Data Centers

LiDAR & Sensors

AR/VR

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For additional information, please contact us at the address below or visit our website

若需要更多信息，请发送邮件联系我们的工作人员或访问我们的网站

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ADVANCED MICRO FOUNDRY

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001

CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM ISO 14001

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