

TGVI High Speed T/ROSA OE

Introduction:

TGVI high-speed T/ROSA OE products are based on the self-developed TGV optoelectronic interposer chip of Shenzhen Optics Valley. Through laser induction, deep silicon etching technology, redistribution wiring (RDL) and micro-bump processes, optoelectronic chip packaging interconnection and optoelectronic signal conversion based on glass substrates are realized. The self-developed TGV interposer chip can achieve a wiring bandwidth of more than 110GHz, significantly improving the signal transmission efficiency and density. It matches the mainstream silicon photonic modulation chip and electric driver chip in the market to realize the integration of 4/8-channel standardized solutions, and is compatible with the pin definitions of mainstream silicon photonic chips and electric chips to achieve highly integrated optoelectronic hybrid packaging. Laser direct-writing waveguides and interposer internal slot structures can be integrated on the chip, which can support low-loss coupling with FAU, MT ferrules, MCF, etc., to achieve high-density optical path fan-in and fan-out.

Performance characteristics:

- Modules are highly integrated and customized
- RDL and micro-bump processes support wiring bandwidth > 110GHz
- Support 2.5D/3D packaging of optoelectronic chips
- Support low-loss optical waveguide laser direct writing
- Support three-dimensional structure grooving, support low-loss high-density optical coupling

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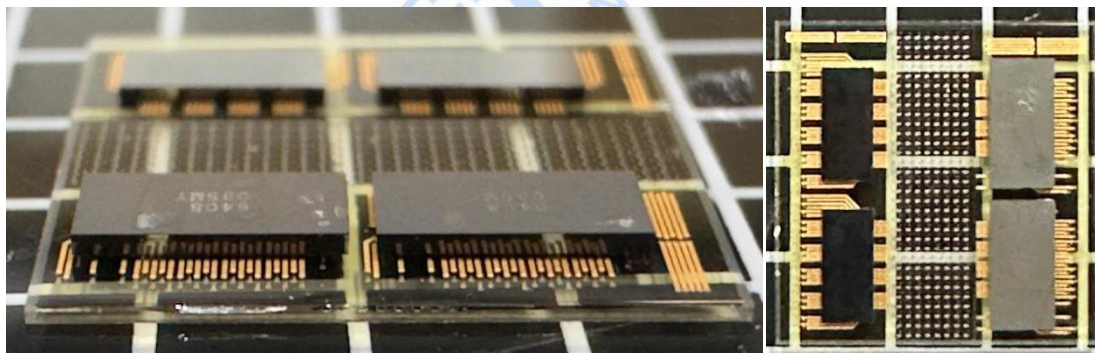
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Key parameter indicators:

Parameters	Scope
OE module size (excluding FA, etc.)	5mm×9mm
Interposer glass thickness	260μm
Wiring bandwidth	> 110GHz
TGV hole opening	60μm—25μm
RDL line width and spacing	80μm-15μm
RDL thickness	3μm
PI thickness	5μm
Bump ball diameter	60μm
Channel rate	>110G

TGV T/ROSA OE Application Schematic:



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