Cilas
laserandbeyond

HIGH POWER OPTICAL AMPLIFIER (HPOA)

FOR SPACE-BASED LASER COMMUNICATION TERMINALS

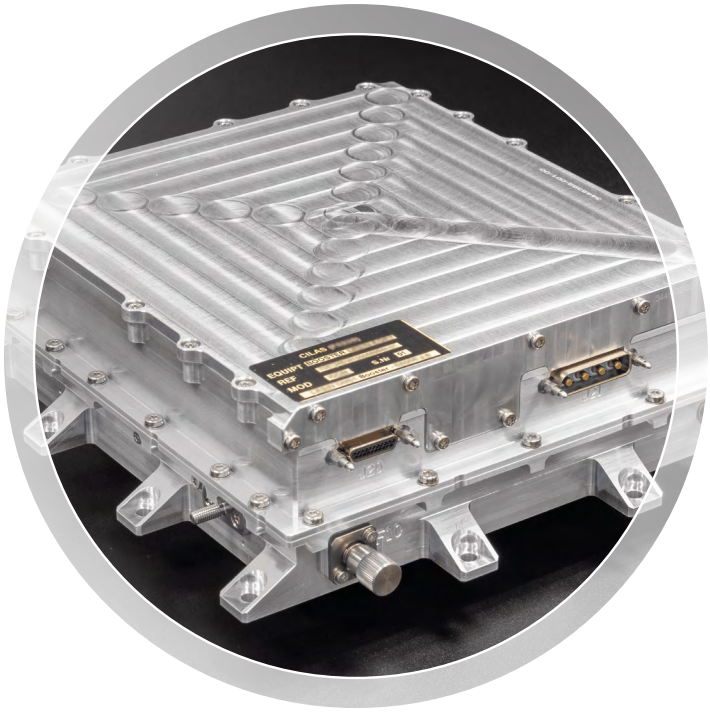
FOR OPTICAL COMMUNICATIONS IN SPACE

- Hi-Rel product for GEO and LEO applications
- Stand-alone equipment with integrated electronics
- Product selected by Airbus Defence and Space for TELEO and LASIN in-orbit demonstrations on-board BADR-8 and CO3D satellites

LASER COMMUNICATIONS

LASER AMPLIFIER

BREAKTHROUGH FIBER LASER AMPLIFIER TECHNOLOGY DESIGNED FOR OPTICAL COMMUNICATIONS IN SPACE



- In-flight adjustable optical output power in Automatic Power Control (APC) mode
- Compatible with classical modulation formats including: OOK, DPSK, NRZ, QPSK, etc.
- Polarization maintaining (PM) or non-polarization maintaining options are available

PRODUCT ON-BOARD
BADR-8 (GEO) & CO3D (LEO) SATELLITES

SPECIFICATIONS	
PERFORMANCES	
WAVELENGTH	1535-1565 µm (C_band)
INPUT POWER SIGNAL	down to 50 µW (-13 dBm)
OUTPUT POWER SIGNAL	up-to 5W (first flight on BADR-8) or 11 W (on-going development)
MASS AND DIMENSIONS	
MASS	between 1.6 kg and 3.5 kg depending on the options
DIMENSIONS	5W: 183 mm x 163 mm x 65 mm 10W: 220 mm x 200 mm x 65 mm
LIFETIME AND RELIABILITY	
LIEFTIME	up to 15 years and compatible GEO, EOR and LEO
RELIBILITY	500 FIT @100% duty cycle
ENVIRONMENTS	
OPERATING TEMPERATURE	+10°C ; +55°C
NON-OPERATING TEMPERATURE	-35°C ; +70°C
RADIATIONS (TIDL)	up to 10 Mrad
RANDOM VIBRATIONS	18 Grms (OOP) ; 10 Grms (IP)
SHOCKS	1300 g

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