SPACE PHOTONICS

5 W space optical booster and preamplifier systems

Combined optical power amplification and receive preamplification in a compact mission enclosure.

Applications to discuss: LEO optical terminals; Spaceborne transmit and receive chains.

Platform specification; mission evidence required

Selection points
5 W listed booster output / Combined booster and preamplifier / 30 krad reported radiation rating

Configuration options

Platform reference	Listed booster output	Reported radiation rating
Combined space amplifier	5 W	Up to 30 krad; conditions to confirm

Each row is a separate configuration. Limits from different rows must not be combined.

Technical details

Parameter	Specification or condition
Reference orbit class	LEO design context
Signal wavelength	Confirm the exact passband of this platform
Receive amplifier gain and noise	Not numerically specified
Radiation conditions	Material reference, shielding, dose rate and particle environment not specified

Integration and delivery

Item	Configuration detail
Integration	Shared mission enclosure; dimensions, mass, power and thermal path to confirm

Conditions and configuration notes

• Mission acceptance requires a configuration-specific qualification plan and evidence for the delivered hardware. No blanket flight, radiation or standards qualification is asserted by this draft.

• Review thermal-vacuum, vibration, shock, radiation and electromagnetic requirements with the mission interfaces.

• The 30 krad figure is not a complete radiation qualification. Its test method, dose basis and applicability to the delivered configuration must be reviewed.