SPACE PHOTONICS

Optical ground-station power amplifiers

C-band high-power optical amplification for ground-to-space communication terminals.

Applications to discuss: Optical satellite uplinks; Ground-station terminals; Space-debris tracking.

Configuration-specific ground hardware

Selection points
50 W described amplifier configuration / C-band output / PPM, OOK or coherent-link review

Configuration options

Configuration	Optical band	Listed output power
Ground-station amplifier	C-band; exact range to confirm	Up to 50 W

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

Technical details

Parameter	Specification or condition
Beam quality	Near diffraction limited; numerical M^2 to confirm
Modulation formats for review	Pulse-position modulation, on-off keying or coherent signalling
Interface conformance	Required optical-communications standard and revision to be agreed

Integration and delivery

Item	Configuration detail
Integration	Custom optical, control and thermal interfaces

Conditions and configuration notes

• The detailed description gives up to 50 W; a separate headline mentions greater than 50 W. This draft adopts the described 50 W configuration and leaves higher output for confirmation.

• Modulation format, peak power, duty cycle and received waveform quality must be specified together.