Control Network Solutions
OPENING NETWORK FRONTIERS

Typical CNS LonFibre Optical Power

Fibre Optic Operating Specifications for CNS LonFibre Products

Multimode {1310/1550nm} WDM	**Performance**	**Comment**
Coupled optical power	Min. -10dBm, Max. 0dBm	Optical power into 50/125 or 62.5/125µm MMF.
Receive optical sensitivity	-28dBm	
Optical Link budget	18-20dBm	
Maximum distance between nodes	**2km**	

Multimode {1310/1550nm} WDM	**Performance**	**Comment**
Coupled optical power	Min. -8dBm, Max. 0dBm	Optical power into 50/125 or 62.5/125µm MMF.
Receive optical sensitivity	-28dBm	
Optical Link budget	18-20dBm	
Maximum distance between nodes	**5km**	

Singlemode {1310/1550nm} WDM	**Performance**	**Comment**
Coupled optical power	Min. -14dbm Max. -8dBm	Optical power into 9/125µm SMF.
Receive optical sensitivity	-31dBm	
Optical Link budget	17-33dBm	
Maximum distance between nodes	**15km**	

Singlemode {1310/1550nm} WDM	**Performance**	**Comment**
Coupled optical power	Min. -9dbm Max. -3dBm	Optical power into 9/125µm SMF.
Receive optical sensitivity	-31dBm	
Optical Link budget	17-33dBm	
Maximum distance between nodes	**25km**	

Singlemode {1310/1550nm} WDM	Performance	Comment
Coupled optical power	Min. -8dbm Max. 0dBm	Optical power into 9/125µm SMF.
Receive optical sensitivity	-34dBm	
Optical Link budget	17-33dBm	
Maximum distance between nodes	**40km**	

Singlemode {1310/1550nm} WDM	Performance	Comment
Coupled optical power	Min. -5dbm Max. -0dBm	Optical power into 9/125µm SMF.
Receive optical sensitivity	-34dBm	
Optical Link budget	17-33dBm	
Maximum distance between nodes	**60km**	

Singlemode {1310/1550nm} WDM	Performance	Comment
Coupled optical power	Min. 0dbm Max. +5dBm	Optical power into 9/125µm SMF.
Receive optical sensitivity	-34dBm	
Optical Link budget	17-33dBm	
Maximum distance between nodes	**80km**	

Actual performance will depend upon your calculated loss budget, which is typically different for every application. To determine your link margin, start with the link budget for the desired cable type and wavelength. Add together all of the losses you expect to insert into the system; this may include allowances for connectors, cable attenuation in dB/Km, splices, patch panels (if used), and other anticipated losses. Subtract this number in dB from the link budget to calculate your remaining link margin.

Link Budget - (total of link losses) = Link Margin

Your worst-case Link Margin should be greater than your design goal (typically users will guard-band the worst-case calculations to retain a design goal of some amount, such as 3 dB).

Contact Details

Control Network Solutions Ltd

Studio 7,Intec 2, Intec Business Park
Wade Road, BASINGSTOKE,
Hampshire, RG24 8NE, England

Tel: +44 (0) 1256 818700
Fax: +44 (0) 1256 812520
Email: cns@control-network-solutions.co.uk
Web: http://www.control-network-solutions.co.uk