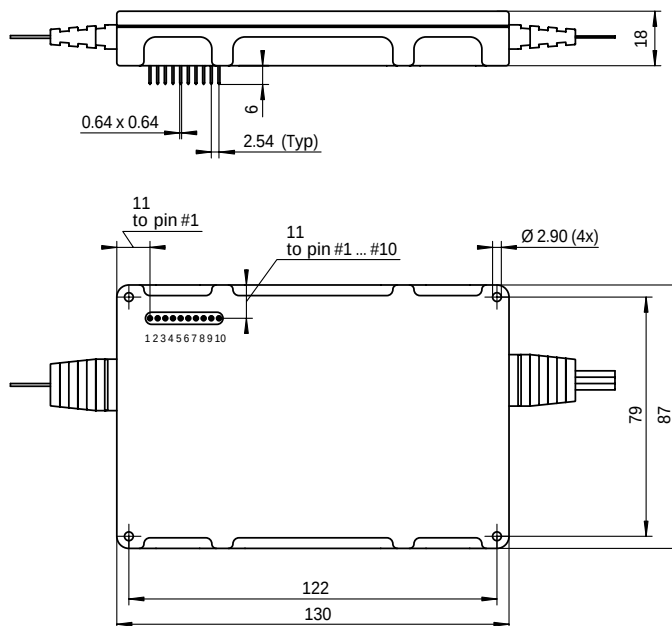


Dimensions in mm ± 0.2 mm



FEATURES

- Compliant with
 - EN 181 00
 - Telcordia GR-1209, GR-1221
 - ETSI ES 300 671

DESCRIPTION

This specification describes a dense wavelength division multiplexer / demultiplexer to multiplex / demultiplex a signal consisting of 40 optical channels with a channel spacing of 100 GHz. The component is realized by a 40-Channel-Arrayed-Wave-Guide (AWG).

Types of Components

	MUX	DEMUX-LL	DEMUX-FT
C-Band (first channel 192.0 THz)	X	X	X
L-Band (first channel 186.7 THz)	X	X	X

*) Ordering Information

		Part number		Description
	Type of Component	V23845-	D	DEMUX
			M	MUX
w	Wavelength Range		1	C-Band
			4	L-Band
x	Number of Channels		1	8
			2	16
			3	24
			4	32
			5	40
			6	>40 on request
y	Channel Spacing		1	200
			2	100
			3	50 on request
z	Design Options		1	Low Loss
			2	Flat Top

Module Specifications

	Sym- bol	MUX	DEMUX- LL	DEMUX- FT	Unit
Number of channels	N	40			
Channel spacing	Δf	100			GHz
Nominal center wavelength	λ_c	ITU-T grid			
Accuracy of channel center frequency	δf	± 3			GHz
Bandwidth @ 1 dB	PB1	≥ 40	≥ 25	≥ 40	dB
Bandwidth @ 3 dB		≥ 50	≥ 50	≥ 75	
Insertion loss	IL		≥ 32	≥ 30	
Insertion loss uniformity	ΔIL	≤ 1.6			
Isolation (adjacent channel)	ISO _a		≥ 25	≥ 24	
Isolation (non-adjacent channel)	ISO _n		≥ 32	≥ 30	
Passband ripple	R			< 1	
Polarization Dependant Loss	PDL	≤ 0.5			
Optical return loss	ORL	≥ 50			
Max. opt. power	P _{max}	20			dBm
Storage temperature	T _s	−40...85			°C
Operation temperature	T _{op}	0...70			
Type of temperature stabilization		Heater			
Heater Power	P _H	6			W
Set point of Heater	T ^{set}	75±4			°C
Type of temperature sensor	RTD	PT 100			Ω/°C
Weight		200			g

Pin Description

Pin #	RTD Pinout	Pin #	RTD Pinout
1	+ Heater	6	Not connected
2	Not connected	7	RTD1 A
3	Not connected	8	RTD1 B
4	Not connected	9	RTD1 B
5	Not connected	10	- Heater

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Information

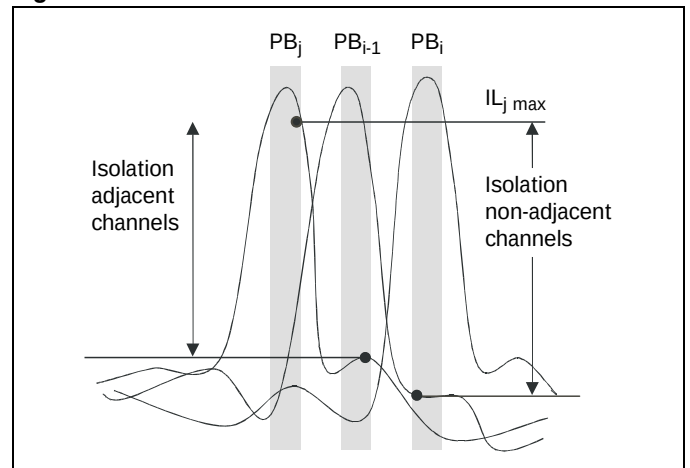
For further information on technology, delivery terms and conditions and prices please contact the Infineon Technologies offices or our Infineon Technologies Representatives worldwide - see our webpage at www.infineon.com/fiberoptics

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Definitions

Number of channels	N	
Channel Spacing	δf	Frequency difference between adjacent channels
Passband	PB	Centred at ITU and equal to 200 pm for Demux-LL and 300 pm for Demux-FT
1 dB Bandwidth	PB1	Width of port n at $IL(n) - 1$ dB
Insertion Loss	IL	Maximum channel loss at pass-band
IL Uniformity	ΔIL	Difference between highest and lowest IL
Polarization Dependent Loss	PDL	Maximum loss variation in PB due to change of state of polarization
Optical Return Loss	ORL	Ratio of reflected power to incident power
Isolation	ISO	Figure 1

Figure 1. Isolation



$$I_{cum} = 10 \cdot \log \sum_{i=1, i \neq j}^N [IL_j max - IL_i min in PB_j] / 10$$

$IL_j max$: Maximal Insertion loss of channel j in the Passband of channel j

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your Infineon Technologies offices.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.