

Item	Specifications	Qty (#)
Isolator	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Isolation ≥ 20 dB • Insertion loss ≤ 1 dB • Extinction ratio ≥ 20 dB • Return loss ≥ 50 dB • Power handling ≥ 300 mW • Fast axis blocked • Fiber type: Nufern PM 1950, 250 μm with APC connector 	2
In-line polariser	<ul style="list-style-type: none"> • Wavelength: 2000 nm • Insertion loss < 1 dB • Extinction ratio ≥ 20 dB • Return loss ≥ 50 dB • Power handling ≥ 300 mW • Input fiber : Nufern SM 1950, 250 μm bare fiber, without connector • Output fiber : Nufern PM 1950, 250 μm bare fiber, without connector 	1
Multimode Pump combiner	<ul style="list-style-type: none"> • Polarisation maintaining • Port type: (6+1) x1 • Pump wavelength/power: 793 nm/150 W per port • Signal wavelength: 2000 nm • Insertion loss ≤ 0.7 dB • Pump efficiency ≥ 95 % • Extinction ratio ≥ 16 dB • Pump fiber: Nufern-FUD-3986-MM-S200/220-22FA • Input signal fiber: Nufern-PM1950 • Output Signal fiber: Nufern-FUD-3716-PLMA-GDF-25/400-10FA 	1
Multimode Pump combiner	<ul style="list-style-type: none"> • Polarisation maintaining • Port type: (2+1) x1 • Pump wavelength/power: 793 nm/20 W per port • Signal wavelength: 2000 nm • Insertion loss ≤ 0.7 dB • Pump efficiency ≥ 95 % • Extinction ratio ≥ 16 dB • Pump fiber: Nufern-MM-S105/125-0.22NA • Input signal fiber: Nufern-PM1950 	1

	<ul style="list-style-type: none"> • Output Signal fiber: Nufern-PM-GDF-10/130-2000-M 	
Mode field adaptor	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Input fiber: Nufern-PM-GDF-10/130-2000-M • Output fiber: Nufern-PM-1950 	1
Coupler	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Port type: 1 x 2 • A grade • Coupling ratio: 50/50 • Fiber type: Fujikura-SM15-PS-U25D, 250 um bare fiber, without connector • Excess loss < 1 dB • Extinction ratio ≥ 16 dB 	2
Coupler	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Port type: 1 x 2 • A grade • Coupling ratio: 10/90 • Fiber type: Fujikura-SM15-PS-U25D, 250 um bare fiber, without connector • Excess loss < 1 dB • Extinction ratio ≥ 16 dB 	2
Coupler	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Port type: 2 x 2 • A grade • Coupling ratio: 50/50 • Fiber type: Fujikura-SM15-PS-U25D, 250 um bare fiber, without connector • Excess loss < 1 dB • Extinction ratio ≥ 16 dB 	2
Patch cord	<ul style="list-style-type: none"> • Fiber type: Nufern SM 1950 • Length: 6 m, with 900 um loose tube, FC/APC connector • Power handling ≥ 500 mW 	2
Patch cord	<ul style="list-style-type: none"> • Fiber type: Nufern PM 1950 • Length: 1 m, 900 um loose tube, FC/PC connector • Power handling ≥ 500 mW 	4

Coupler	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 1550 nm • Port type: 2 x2 • Coupling ratio: 1/99 • Excess loss < 1 dB • Extinction ratio ≥ 16 dB • Return loss ≥ 50 dB • Fiber type: Corning PM 15-U25 D, with 900 um loose tube, FC/APC connector 	6
Coupler	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 1550 nm • Port type: 2 x2 • Coupling ratio: 50/50 • Excess loss < 1 dB • Extinction ratio ≥ 16 dB • Return loss ≥ 50 dB • Fiber type: Corning PM 15-U25 D, with 900 um loose tube, FC/APC connector 	4
Polarisation controller	<ul style="list-style-type: none"> • Fiber type: SMF 28, with 900 um loose tube, FC/APC connector • Wavelength: 1550 nm 	1
Circulator	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 1550 nm • Fast axis blocked • Insertion loss < 2 dB • Isolation ≥ 20 dB • Return loss ≥ 50 dB • Extinction ratio ≥ 20 dB • Power handling ≥ 300 mW • Fiber type: Corning PM 15-U25 D, with 900 um loose tube, FC/APC connector 	1
Isolator	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 1550 nm • Fast axis blocked • Insertion loss < 1 dB • Isolation ≥ 20 dB • Extinction ratio ≥ 20 dB • Fiber type: Corning PM 15-U25 D, with 900 um loose tube, FC/APC connector 	2

Circulator	<ul style="list-style-type: none"> • Polarisation maintaining • Wavelength: 2000 nm • Fast axis blocked • Insertion loss < 2 dB • Isolation \geq 20 dB • Return loss \geq 50 dB • Extinction ratio \geq 20 dB • Power handling \geq 500 mW • Fiber type: Nufern PM1950, with 250 μm bare fiber, without connector 	1
Wavelength division Multiplexer	<ul style="list-style-type: none"> • Wavelength: 790/2000 nm • Insertion loss < 1 dB • Fiber type : SM 1950, with 250 μm bare fiber, without connector 	1

Note: Bidders need to quote for all the above items IIT Madras will decide on purchase of either one item or combination of two or three items after arriving L1 as per norms.