

PASSPORT DATA SHEET

100G PAM4 DWDM QSFP28



Champion ONE's PAM4 DWDM QSFP28 is designed for data center interconnect applications that require high fiber capacity for links up to 80 km. The optical interface utilizes two DWDM wavelengths on a 50 GHz grid. The PAM4 modulation format is used to increase capacity enabling 50 Gb/s on each wavelength. Integrated, high-gain FEC (Forward Error Correction) and advanced Rx ADC/DSP technology enable use in Champion ONE's 100G Active DWDM Open Line System.

Champion ONE **Passport** transceivers are programmed for universal compatibility across multiple OEM platforms. This open methodology reduces costs and unlocks operational simplicity by reducing sparing costs.

Technical Specifications

STANDARDS AND REGULATORY COMPLIANCE

RoHS compliant
QSFP28 MSA (multi-source agreement)
SFF-8665 compliant
IEEE P802.3bm Annex 83E

PROTOCOLS AND DATA RATES

100G Ethernet (2x56Gbps)

CONNECTOR

LC connector

WARRANTY

All feature a limited lifetime warranty

TEMPERATURE RANGE

20 to 70° C

NOTES

Integrated, high-gain FEC (forward error correction)
Extended digital diagnostic monitoring and alarm functions
Tested for use in Champion ONE's 100G Active DWDM Open Line System

C1 Part Number	Wavelength ¹	Fiber Type	Rated Distance (km)	Description	Avg. Launch Power per Lane (min/max) (dBm)	Avg. Rx Power per Lane (min/max) (dBm)	Max Power Consumption (W)
SINGLE RATE (100GBASE ETHERNET)							
100GEQ-Dxx-PAM4	L1: ITU ch. 20 to 59 + 25GHz L2: ITU ch. 20 to 59 - 25GHz (xx = 20 - 59)	SMF	120 ²	100G DWDM QSFP28 CH xx, 15xx.xnm PAM4 (CH20-59 available)	-11 / -8	-2 / 6	5.0

1. For full channel information, refer to the table on page 2.

2. These transceivers will not work without EDFA amplification and dispersion compensation to compensate for fiber link loss and fiber dispersion over any distance. Champion ONE recommends using with C1's Open Line Systems or amplifiers.

ITU Channel	100 GHz Grid (THz)	Lane 1		Lane 2	
		ITU + 25GHz (THz)	ITU + 25GHz (nm)	ITU - 25GHz (THz)	ITU - 25GHz (nm)
20	192.00	192.025	1561.22	191.975	1561.62
21	192.10	192.125	1560.40	192.075	1560.81
22	192.20	192.225	1559.59	192.175	1560.00
23	192.30	192.325	1558.78	192.275	1559.19
24	192.40	192.425	1557.97	192.375	1558.38
25	192.50	192.525	1557.16	192.475	1557.57
26	192.60	192.625	1556.35	192.575	1556.76
27	192.70	192.725	1555.55	192.675	1555.95
28	192.80	192.825	1554.74	192.775	1555.14
29	192.90	192.925	1553.93	192.875	1554.34
30	193.00	193.025	1553.13	192.975	1553.53
31	193.10	193.125	1552.32	193.075	1552.73
32	193.20	193.225	1551.52	193.175	1551.92
33	193.30	193.325	1550.72	193.275	1551.12
34	193.40	193.425	1549.92	193.375	1550.32
35	193.50	193.525	1549.11	193.475	1549.52
36	193.60	193.625	1548.31	193.575	1548.71
37	193.70	193.725	1547.52	193.675	1547.92
38	193.80	193.825	1546.72	193.775	1547.12
39	193.90	193.925	1545.92	193.875	1546.32
40	194.00	194.025	1545.12	193.975	1545.52
41	194.10	194.125	1544.33	194.075	1544.72
42	194.20	194.225	1543.53	194.175	1543.93
43	194.30	194.325	1542.74	194.275	1543.13
44	194.40	194.425	1541.94	194.375	1542.34
45	194.50	194.525	1541.15	194.475	1541.55
46	194.60	194.625	1540.36	194.575	1540.76
47	194.70	194.725	1539.57	194.675	1539.96
48	194.80	194.825	1538.78	194.775	1539.17
49	194.90	194.925	1537.99	194.875	1538.38
50	195.00	195.025	1537.20	194.975	1537.59
51	195.10	195.125	1536.41	195.075	1536.81
52	195.20	195.225	1535.63	195.175	1536.02
53	195.30	195.325	1534.84	195.275	1535.23
54	195.40	195.425	1534.05	195.375	1534.45
55	195.50	195.525	1533.27	195.475	1533.66
56	195.60	195.625	1532.49	195.575	1532.88
57	195.70	195.725	1531.70	195.675	1532.09
58	195.80	195.825	1530.92	195.775	1531.31
59	195.90	195.925	1530.14	195.875	1530.53