

The below table is based on DEDFA optimal setup with optimal optical inputs and outputs based on a 48 wavelength design =< 3.5 dB midstage loss.

| # active Wavelengths | DEDFA Input Per λ (dBm) | DEDFA Composit Input (dBm) | DEDFA input TP (VDC) | Input + 25 dB Gain = output (dBm) | DEDFA Output TP (VDC) | DEDFA Gain (dB) | EDFA Gain TP (VDC) |
|----------------------|-------------------------|----------------------------|----------------------|-----------------------------------|-----------------------|-----------------|--------------------|
| 1                    | -21.8                   | -21.8                      | 1.2                  | 3.2                               | 2.4                   | 25              | 0.43               |
| 2                    | -21.8                   | -18.79                     | 1.35                 | 6.21                              | 2.55                  | 25              | 0.43               |
| 3                    | -21.8                   | -17.03                     | 1.44                 | 7.97                              | 2.64                  | 25              | 0.43               |
| 4                    | -21.8                   | -15.78                     | 1.5                  | 9.22                              | 2.7                   | 25              | 0.43               |
| 5                    | -21.8                   | -14.81                     | 1.55                 | 10.19                             | 2.75                  | 25              | 0.43               |
| 6                    | -21.8                   | -14.02                     | 1.59                 | 10.98                             | 2.79                  | 25              | 0.43               |
| 7                    | -21.8                   | -13.35                     | 1.62                 | 11.65                             | 2.82                  | 25              | 0.43               |
| 8                    | -21.8                   | -12.77                     | 1.65                 | 12.23                             | 2.85                  | 25              | 0.43               |
| 9                    | -21.8                   | -12.26                     | 1.68                 | 12.74                             | 2.88                  | 25              | 0.43               |
| 10                   | -21.8                   | -11.8                      | 1.7                  | 13.2                              | 2.9                   | 25              | 0.43               |
| 11                   | -21.8                   | -11.39                     | 1.72                 | 13.61                             | 2.92                  | 25              | 0.43               |
| 12                   | -21.8                   | -11.01                     | 1.74                 | 13.99                             | 2.94                  | 25              | 0.43               |
| 13                   | -21.8                   | -10.66                     | 1.76                 | 14.34                             | 2.96                  | 25              | 0.43               |
| 14                   | -21.8                   | -10.34                     | 1.77                 | 14.66                             | 2.97                  | 25              | 0.43               |
| 15                   | -21.8                   | -10.04                     | 1.79                 | 14.96                             | 2.99                  | 25              | 0.43               |
| 16                   | -21.8                   | -9.76                      | 1.8                  | 15.24                             | 3                     | 25              | 0.43               |
| 17                   | -21.8                   | -9.5                       | 1.81                 | 15.5                              | 3.01                  | 25              | 0.43               |
| 18                   | -21.8                   | -9.25                      | 1.83                 | 15.75                             | 3.03                  | 25              | 0.43               |
| 19                   | -21.8                   | -9.01                      | 1.84                 | 15.99                             | 3.04                  | 25              | 0.43               |
| 20                   | -21.8                   | -8.79                      | 1.85                 | 16.21                             | 3.05                  | 25              | 0.43               |
| 21                   | -21.8                   | -8.58                      | 1.86                 | 16.42                             | 3.06                  | 25              | 0.43               |
| 22                   | -21.8                   | -8.38                      | 1.87                 | 16.62                             | 3.07                  | 25              | 0.43               |
| 23                   | -21.8                   | -8.18                      | 1.88                 | 16.82                             | 3.08                  | 25              | 0.43               |
| 24                   | -21.8                   | -8                         | 1.89                 | 17                                | 3.09                  | 25              | 0.43               |
| 25                   | -21.8                   | -7.82                      | 1.9                  | 17.18                             | 3.1                   | 25              | 0.43               |
| 26                   | -21.8                   | -7.65                      | 1.91                 | 17.35                             | 3.11                  | 25              | 0.43               |
| 27                   | -21.8                   | -7.49                      | 1.92                 | 17.51                             | 3.12                  | 25              | 0.43               |
| 28                   | -21.8                   | -7.33                      | 1.92                 | 17.67                             | 3.12                  | 25              | 0.43               |
| 29                   | -21.8                   | -7.18                      | 1.93                 | 17.82                             | 3.13                  | 25              | 0.43               |
| 30                   | -21.8                   | -7.03                      | 1.94                 | 17.97                             | 3.14                  | 25              | 0.43               |
| 31                   | -21.8                   | -6.89                      | 1.95                 | 18.11                             | 3.15                  | 25              | 0.43               |
| 32                   | -21.8                   | -6.75                      | 1.95                 | 18.25                             | 3.15                  | 25              | 0.43               |
| 33                   | -21.8                   | -6.61                      | 1.96                 | 18.39                             | 3.16                  | 25              | 0.43               |
| 34                   | -21.8                   | -6.49                      | 1.97                 | 18.51                             | 3.17                  | 25              | 0.43               |
| 35                   | -21.8                   | -6.36                      | 1.97                 | 18.64                             | 3.17                  | 25              | 0.43               |
| 36                   | -21.8                   | -6.24                      | 1.98                 | 18.76                             | 3.18                  | 25              | 0.43               |
| 37                   | -21.8                   | -6.12                      | 1.98                 | 18.88                             | 3.18                  | 25              | 0.43               |
| 38                   | -21.8                   | -6                         | 1.99                 | 19                                | 3.19                  | 25              | 0.43               |
| 39                   | -21.8                   | -5.89                      | 2                    | 19.11                             | 3.2                   | 25              | 0.43               |
| 40                   | -21.8                   | -5.78                      | 2                    | 19.22                             | 3.2                   | 25              | 0.43               |
| 41                   | -21.8                   | -5.67                      | 2.01                 | 19.33                             | 3.21                  | 25              | 0.43               |
| 42                   | -21.8                   | -5.57                      | 2.01                 | 19.43                             | 3.21                  | 25              | 0.43               |
| 43                   | -21.8                   | -5.47                      | 2.02                 | 19.53                             | 3.22                  | 25              | 0.43               |
| 44                   | -21.8                   | -5.37                      | 2.02                 | 19.63                             | 3.22                  | 25              | 0.43               |
| 45                   | -21.8                   | -5.27                      | 2.03                 | 19.73                             | 3.23                  | 25              | 0.43               |
| 46                   | -21.8                   | -5.17                      | 2.03                 | 19.83                             | 3.23                  | 25              | 0.43               |
| 47                   | -21.8                   | -5.08                      | 2.04                 | 19.92                             | 3.24                  | 25              | 0.43               |
| 48                   | -21.8                   | -4.99                      | 2.04                 | 20.01                             | 3.24                  | 25              | 0.43               |
| Alarms = Red LED     |                         | -29                        | 0.84 (LED Alarm)     | -5                                | 2.04                  | 25              | 0.3 (LED Alarm)    |