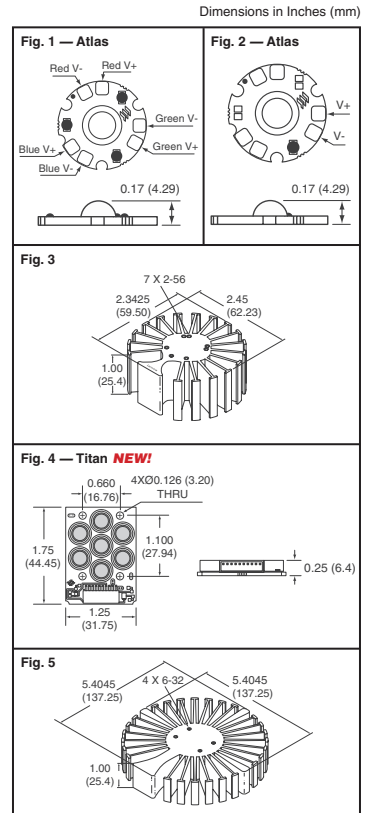


# lamina Light Engines

Bright Lights. Bright Ideas.

| Fig.                                                       | Color                                           | V <sub>I</sub><br>Typical<br>(V)† | I <sub>F</sub><br>Typical<br>(A) | Power<br>(W)† | Lumens<br>(lm)† | Kelvin<br>Units | Digi-Key<br>Part No.    | 1      | Price Each<br>10 | 50     | T & R<br>Pricing<br>250 | Lamina<br>Part No. |
|------------------------------------------------------------|-------------------------------------------------|-----------------------------------|----------------------------------|---------------|-----------------|-----------------|-------------------------|--------|------------------|--------|-------------------------|--------------------|
| <b>Atlas™ — RoHS Compliant</b>                             |                                                 |                                   |                                  |               |                 |                 |                         |        |                  |        |                         |                    |
| 1                                                          | R/G/B                                           | 4.8/7.1/7.5                       | 35                               | 1.6/2.4/2.6   | 52/59/14        | —               | 521-1035-1-ND           | 24.00  | 21.00            | 18.00  | 3930.00                 | NT-43F0-0424       |
| 2                                                          | White                                           | 7.5                               | .70                              | 5.25          | 120             | 3,000           | 521-1037-1-ND           | 16.00  | 14.00            | 12.00  | 2620.00                 | NT-42D1-0425       |
|                                                            | White                                           | 7.6                               | .70                              | 5.32          | 175             | 5,500           | 521-1039-1-ND           | 15.40  | 13.48            | 11.55  | 2521.75                 | NT-42D0-0426       |
|                                                            | Red                                             | 4.7                               | .70                              | 3.3           | 90              | —               | 521-1054-ND <b>NEW!</b> | 16.00  | 12.56            | 11.44  | —                       | NT-41A0-0482       |
|                                                            | Amber                                           | 4.7                               | .70                              | 3.3           | 117             | —               | 521-1055-ND <b>NEW!</b> | 16.00  | 12.56            | 11.44  | —                       | NT-41E0-0483       |
|                                                            | Blue                                            | 7.1                               | .70                              | 5.0           | 58              | —               | 521-1056-ND <b>NEW!</b> | 19.00  | 14.92            | 13.59  | —                       | NT-42B1-0484       |
|                                                            | Green                                           | 7.4                               | .70                              | 5.2           | 190             | —               | 521-1057-ND <b>NEW!</b> | 19.00  | 14.92            | 13.59  | —                       | NT-42C1-0485       |
| 3                                                          | Daylight White                                  | 6.6                               | .70                              | 4.6           | 164             | 4700            | 521-1058-ND <b>NEW!</b> | 19.80  | 15.55            | 14.16  | —                       | NT-45D0-0447       |
|                                                            | Warm White                                      | 6.6                               | .70                              | 4.6           | 119             | 3050            | 521-1059-ND <b>NEW!</b> | 19.80  | 15.55            | 14.16  | —                       | NT-45D1-0446       |
| 3                                                          | Heatsink, 1" (25.4 mm), for Atlas, BL-2000/4000 | —                                 | —                                | —             | —               | —               | 521-1015-ND             | 6.92   | 6.20             | 5.76   | —                       | HS-4100-0345       |
| <b>Titan™ — RoHS Compliant</b>                             |                                                 |                                   |                                  |               |                 |                 |                         |        |                  |        |                         |                    |
| 4                                                          | R/G/B                                           | 7.1/10.8/11.4                     | 1.4                              | 9.9/15.1/16   | 383/395/104     | —               | 521-1045-ND <b>NEW!</b> | 80.20  | 74.36            | 68.12  | —                       | NT-53F0-0428       |
|                                                            | Daylight White                                  | 22.8                              | 1.4                              | 32.0          | 665             | 3,000           | 521-1044-ND <b>NEW!</b> | 77.12  | 71.50            | 65.50  | —                       | NT-52D1-0430       |
|                                                            | Warm White                                      | 23.5                              | 1.4                              | 32.9          | 1070            | 5,500           | 521-1043-ND <b>NEW!</b> | 77.12  | 71.50            | 65.50  | —                       | NT-52D0-0429       |
|                                                            | Daylight White                                  | 10.8                              | 5.0                              | 54.0          | 1855            | 3950            | 521-1060-ND <b>NEW!</b> | 131.10 | 121.55           | 110.50 | —                       | NT-54D0-0487       |
|                                                            | Warm White                                      | 10.8                              | 5.0                              | 54.0          | 1138            | 2750            | 521-1061-ND <b>NEW!</b> | 131.10 | 121.55           | 110.50 | —                       | NT-54D1-0486       |
|                                                            | Red                                             | 13.9                              | 1.05                             | 14.6          | 435             | —               | 521-1062-ND <b>NEW!</b> | 84.83  | 78.65            | 71.50  | —                       | NT-51A0-0468       |
| 5                                                          | Amber                                           | 14.1                              | 1.05                             | 14.8          | 502             | —               | 521-1063-ND <b>NEW!</b> | 84.83  | 78.65            | 71.50  | —                       | NT-51E0-0481       |
|                                                            | Blue                                            | 20.5                              | 1.05                             | 21.5          | 227             | —               | 521-1064-ND <b>NEW!</b> | 92.54  | 85.80            | 78.00  | —                       | NT-52B1-0469       |
|                                                            | Green                                           | 21.8                              | 1.05                             | 22.9          | 923             | —               | 521-1065-ND <b>NEW!</b> | 100.26 | 92.95            | 84.50  | —                       | NT-52C1-0470       |
|                                                            | Heatsink, 1" (25.4 mm), for Titan, BL-3000      | —                                 | —                                | —             | —               | —               | 521-1016-ND             | 25.62  | 22.90            | 21.35  | —                       | HS-5100-0346       |
| 5                                                          | Heatsink, 2.36" (59.94 mm), for Titan, BL-3000  | —                                 | —                                | —             | —               | —               | 521-1016-ND <b>NEW!</b> | 32.02  | 25.14            | 22.90  | —                       | HS-5200-0493       |
| <b>Accessories</b>                                         |                                                 |                                   |                                  |               |                 |                 |                         |        |                  |        |                         |                    |
| EZConnect Board with Connector for BL-4000 Series          |                                                 |                                   |                                  |               |                 |                 | 521-1024-ND             | 8.84   | 7.74             | 5.53   | —                       | EZ-4000-3357       |
| EZConnect Assembly Cable for BL-4000 Series                |                                                 |                                   |                                  |               |                 |                 | 521-1025-ND             | 4.50   | 3.94             | 2.82   | —                       | EZ-46WH-0354       |
| EZConnect Board for Atlas Series, R/G/B                    |                                                 |                                   |                                  |               |                 |                 | 521-1036-ND             | 33.00  | 25.91            | 21.62  | —                       | EZ-43F0-0431       |
| EZConnect Board for Atlas Series, Warm White               |                                                 |                                   |                                  |               |                 |                 | 521-1038-ND             | 25.00  | 19.63            | 16.38  | —                       | EZ-42D1-0432       |
| EZConnect Board for Atlas Series, Daylight White           |                                                 |                                   |                                  |               |                 |                 | 521-1040-ND             | 24.40  | 19.16            | 15.99  | —                       | EZ-42D0-0433       |
| EZConnect Wire Harness for Titan Series                    |                                                 |                                   |                                  |               |                 |                 | 521-1046-ND <b>NEW!</b> | 7.50   | 6.57             | 5.63   | —                       | NT-50WH-0427       |
| Lens, Optic Medium with holder for Atlas Series            |                                                 |                                   |                                  |               |                 |                 | 521-1041-ND             | 5.62   | 4.42             | 3.69   | —                       | OP-4FM1-0442       |
| Lens, Optic Wide with holder for Atlas Series              |                                                 |                                   |                                  |               |                 |                 | 521-1042-ND             | 5.62   | 4.42             | 3.69   | —                       | OP-4FW1-0441       |
| Lens, Optic Narrow 10 Degrees with holder for Titan Series |                                                 |                                   |                                  |               |                 |                 | 521-1050-ND <b>NEW!</b> | 26.00  | 20.41            | 18.59  | —                       | OP-5LN1-0451       |
| Lens, Optic Narrow 25 Degrees with holder for Titan Series |                                                 |                                   |                                  |               |                 |                 | 521-1051-ND <b>NEW!</b> | 20.00  | 15.70            | 14.30  | —                       | OP-5LN2-0445       |
| Lens, Optic Medium 30 Degrees with holder for Titan Series |                                                 |                                   |                                  |               |                 |                 | 521-1052-ND <b>NEW!</b> | 20.00  | 15.70            | 14.30  | —                       | OP-5LM3-0455       |
| Lens, Optic Wide 45 Degrees with holder for Titan Series   |                                                 |                                   |                                  |               |                 |                 | 521-1053-ND <b>NEW!</b> | 20.00  | 15.70            | 14.30  | —                       | OP-5LW4-0456       |
| Lens, Optic Narrow with holder for Atlas RGB Series        |                                                 |                                   |                                  |               |                 |                 | 521-1066-ND <b>NEW!</b> | 10.00  | 7.85             | 7.15   | —                       | OP-4LN1-0457       |
| Lens, Optic Narrow with holder for Atlas White Series      |                                                 |                                   |                                  |               |                 |                 | 521-1067-ND <b>NEW!</b> | 10.00  | 7.85             | 7.15   | —                       | OP-4LN2-0492       |
| <b>Kits</b>                                                |                                                 |                                   |                                  |               |                 |                 |                         |        |                  |        |                         |                    |
| BL-4000, R/G/B                                             |                                                 |                                   |                                  |               |                 |                 | 521-1032-ND             | 287.50 | —                | —      | —                       | DK-04F0-0396       |
| BL-4000 120VAC, White                                      |                                                 |                                   |                                  |               |                 |                 | 521-1033-ND             | 138.75 | —                | —      | —                       | DK-04D0-0394       |
| BL-4000 230VAC, White                                      |                                                 |                                   |                                  |               |                 |                 | 521-1034-ND             | 137.50 | —                | —      | —                       | DK-04D0-0395       |
| Titan, White                                               |                                                 |                                   |                                  |               |                 |                 | 521-1047-ND <b>NEW!</b> | 287.50 | —                | —      | —                       | DK-05D0-0399       |
| Titan, Red, Green, Blue                                    |                                                 |                                   |                                  |               |                 |                 | 521-1048-ND <b>NEW!</b> | 356.25 | —                | —      | —                       | DK-05F0-0398       |

† Optical and electrical specifications are given for the specified drive current at a 25° junction temperature. ♦ RoHS Compliant



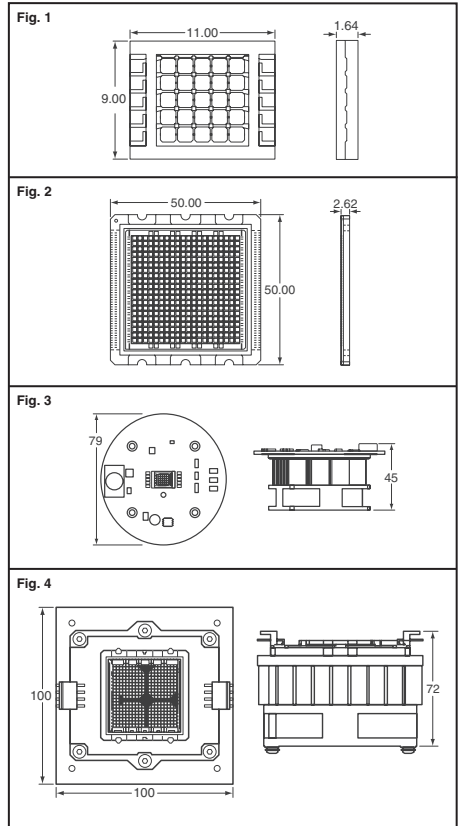
## NEW! ENFIS LED Arrays and Engines

Dim. in mm

| Fig.                                           | Emitted Color | Peak Wavelength (nm) | V <sub>I</sub> (V) Typical | I <sub>F</sub> (A) Max. | Lumens (lm) Typical | Digi-Key Part No. | 1       | Price Each 10 | 50      | 100    |
|------------------------------------------------|---------------|----------------------|----------------------------|-------------------------|---------------------|-------------------|---------|---------------|---------|--------|
| <b>Uno 5 x 5 Arrays — RoHS Compliant</b>       |               |                      |                            |                         |                     |                   |         |               |         |        |
| 1                                              | Amber         | 595                  | 11.5                       | .9                      | ~280                | 722-1025-ND       | 194.75  | 173.68        | 163.61  | 159.80 |
|                                                | Blue          | 465                  | 17                         | 2.0                     | ~270                | 722-1026-ND       | 194.75  | 173.68        | 163.61  | 159.80 |
|                                                | Green         | 520                  | 18                         | 2.0                     | ~1050               | 722-1027-ND       | 194.75  | 173.68        | 163.61  | 159.80 |
|                                                | Infra-Red     | 870                  | 9                          | 2.0                     | —                   | 722-1028-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
|                                                | Red           | 630                  | 11                         | 1.1                     | ~300                | 722-1029-ND       | 194.75  | 173.68        | 163.61  | 159.80 |
|                                                | Ultra Violet  | 375                  | 37                         | .4                      | —                   | 722-1030-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
| 2                                              | Violet        | 410                  | 20                         | 2.0                     | —                   | 722-1031-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
|                                                | White         | —                    | 13                         | 1.4                     | 360                 | 722-1032-ND       | 194.75  | 173.68        | 163.61  | 159.80 |
| <b>Quattro 20 x 20 Arrays — RoHS Compliant</b> |               |                      |                            |                         |                     |                   |         |               |         |        |
| 2                                              | Violet        | 405                  | 36                         | 11.0                    | —                   | 722-1001-ND       | 3155.25 | 2917.26       | —       | —      |
|                                                | Amber         | 595                  | 23                         | 7.2                     | ~4500               | 722-1002-ND       | 2261.57 | 2080.93       | 2018.94 | —      |
|                                                | Red           | 630                  | 22                         | 8.8                     | ~4800               | 722-1003-ND       | 2261.57 | 2080.93       | 2018.94 | —      |
|                                                | Ultra Violet  | 375                  | 74                         | 3.2                     | —                   | 722-1004-ND       | 3155.25 | 2917.26       | —       | —      |
|                                                | White (RGBA)† | 590                  | 23                         | 1.8                     | 1100                | 722-1005-ND       | 2261.57 | 2080.93       | 2018.94 | —      |
|                                                | Blue          | 465                  | 32                         | 12.0                    | 3300                | 722-1006-ND       | 2261.57 | 2080.93       | 2018.94 | —      |
| 3                                              | Green         | 520                  | 35                         | 11.6                    | 12600               | 722-1007-ND       | 2261.57 | 2080.93       | 2018.94 | —      |
|                                                | Infra-Red     | 870                  | 18                         | 16.0                    | —                   | 722-1008-ND       | 3155.25 | 2917.26       | —       | —      |

† Data shown for A (All Color); for detailed information on individual color separations, please see data sheet on Digi-Key's website.

| Fig.                                    | Emitted Color | Peak Wavelength (nm) | Input Voltage (V) Typical | Watts (W) | Lumens (lm) Typical | Digi-Key Part No. | 1       | Price Each 10 | 50      | 100    |
|-----------------------------------------|---------------|----------------------|---------------------------|-----------|---------------------|-------------------|---------|---------------|---------|--------|
| <b>Uno Air Cooled Light Engines</b>     |               |                      |                           |           |                     |                   |         |               |         |        |
| 3                                       | Amber         | 595                  | 9                         | 18        | 360                 | 722-1017-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
|                                         | Infra-Red     | 870                  | 5                         | 18        | —                   | 722-1018-ND       | 533.12  | 483.34        | 460.60  | 446.88 |
|                                         | Red           | 630                  | 9                         | 18        | 288                 | 722-1019-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
|                                         | Ultra Violet  | 375                  | 12                        | 18        | —                   | 722-1020-ND       | 533.12  | 483.34        | 460.60  | 446.88 |
|                                         | White         | —                    | 9                         | 18        | 337                 | 722-1021-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
|                                         | Blue          | 465                  | 12                        | 36        | 252                 | 722-1022-ND       | 279.24  | 249.02        | 234.59  | 229.13 |
| 4                                       | Green         | 520                  | 12                        | 36        | 792                 | 722-1023-ND       | 298.74  | 249.02        | 234.59  | 229.13 |
|                                         | Violet        | 410                  | 12                        | 36        | —                   | 722-1024-ND       | 533.12  | 483.34        | 460.60  | 446.88 |
| <b>Quattro Air Cooled Light Engines</b> |               |                      |                           |           |                     |                   |         |               |         |        |
| 4                                       | Blue          | 465                  | 48                        | 200       | 1485                | 722-1009-ND       | 2764.71 | 2543.88       | 2468.10 | —      |
|                                         | Green         | 520                  | 48                        | 200       | 4988                | 722-1010-ND       | 2764.71 | 2543.88       | 2468.10 | —      |
|                                         | White (RGBA)  | —                    | 48                        | 200       | 3500                | 722-1011-ND       | 2764.71 | 2543.88       | 2468.10 | —      |
|                                         | Red           | 630                  | 48                        | 200       | 3140                | 722-1012-ND       | 2764.71 | 2543.88       | 2468.10 | —      |
|                                         | Amber         | 595                  | 48                        | 200       | 3984                | 722-1013-ND       | 2764.71 | 2543.88       | 2468.10 | —      |
|                                         | Violet        | 410                  | 48                        | 200       | —                   | 722-1014-ND       | 3641.05 | 3366.42       | —       | —      |
| 4                                       | Ultra Violet  | 375                  | 48                        | 200       | —                   | 722-1015-ND       | 3641.05 | 3366.42       | —       | —      |
|                                         | Infra-Red     | 870                  | 48                        | 200       | —                   | 722-1016-ND       | 3641.05 | 3366.42       | —       | —      |



~ Exclusive Preview ~  
New Product Available Now!