# V Family: Variable Modular

| Model Number | USLR-V20F-NMNN | USLR-V12F-NMNN | USLR-V08F-NMNN |
|---|---|---|---|
| Smart Part Number | V5NM-NNNN-NNSL-NS00-0000 | V3NM-NNNN-NNSL-NS00-0000 | V1NM-NNNN-NNSL-NS00-0000 |
| **OPTICAL PERFORMANCE SPECIFICATIONS** | | | |
| Spatial Luminance Uniformity over Exit Port (f/4) - All Lamps On | +/-1% | +/-1% | +/-1% |
| Angular Uniform FOV (Full Angle) - Degrees / F# / NA - All Lamps On | +/-2.0% - 35° / 0.85 / 0.6 | +/-2.0% - 35° / 0.85 / 0.6 | +/-2.0% - 35° / 0.85 / 0.6 |
| Expected Luminance Output: cd/m2 | 4,200 | 14,000 | 28,000 |
| Expected Illuminance at Port: lux | 13,200 | 44,000 | 88,000 |
| Peak Radiance: W/m2-sr-um @ 0.95 um | 105 | 350 | 700 |
| Peak Irradiance @ Port: Photons/s-m2-um @ 0.95um | 4.50E+20 | 1.50E+21 | 3.00E+21 |
| Minimum Resolution: lux | 2.64E-01 | 8.80E-01 | 1.76E+00 |
| Number of Steps in System Range | 1.00E+04 | 1.00E+04 | 1.00E+04 |
| Dynamic Range/Bits/dB | 5.00E+04/15/93 | 5.00E+04/15/93 | 5.00E+04/15/93 |
| Approximate Correlated Color Temperature (QTH) | 3000K +/-50K | 3000K +/-50K | 3000K +/-50K |
| Typical Lamp Lifetimes (hrs) | >500 | >500 | >500 |
| Est. Lamp Degradation Over Lifetime (% & CCT Shift) | -10% & +/-200K | -10% & +/-200K | -10% & +/-200K |
| Est. Output Degradation over 50hrs (% & CCT Shift) | -1.0% & +/-20K | -1.0% & +/-20K | -1.0% & +/-20K |
| **INTEGRATING SPHERE** | | | |
| Coating / Material | Spectraflect | Spectraflect | Spectraflect |
| Sphere Internal Diameter: Inches (Meters) | 20 (0.5) | 12 (0.3) | 8 (0.2) |
| Frame Type | 20 in Cage | 12 in Cage | 8 in Cage |
| Output Port Size: Inches (Meters) | 8 (0.2) | 4 (0.1) | 2 (0.05) |
| **SYSTEM COMPONENTS** | | | |
| QTH Lamps Internal (# , Wattage) | None | None | None |
| QTH Lamps External (#, Wattage) | (1) 150 | (1) 150 | (1) 100 |
| Power Supplies (# - Model) | (1) - LPS-400 | (1) - LPS-400 | (1) - LPS-400 |
| Variable Attenuator | VAM-010 | VAM-010 | VAM-010 |
| Monitor Detector(s) | SD-S1 | SD-S1 | SD-S1 |
| Detector Filters (in Filter Holder) | Photopic | Photopic | Photopic |
| System Software | HELIOSense Local | HELIOSense Local | HELIOSense Local |
| **STANDARD SYSTEM CALIBRATIONS (NIST Traceable)** | | | |
| Luminance | Yes | Yes | Yes |
| Correlated Color Temp (All lamps matched & w/VA position) | Yes | Yes | Yes |
| Spectral Radiance (350-2400nm) | No | No | No |
| Exit Port Spatial Uniformity | Yes | Yes | Yes |
| Exit port Angular Uniformity | Yes | Yes | Yes |
| Operational Duration of Calibration | 50 hrs | 50 hrs | 50 hrs |




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