**Calibration Certificate**

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| **Report #: LSRP230612-01** | **MODEL:** iSphere-D3-PWR-HS  （SN：LSIS-230609-001） |
|  | **DATE OF REPORT:** 2023-06-12 |
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| **Rendered To:** | 科电贸易（上海）有限公司 | |
|  | | |
| **Authorization: Sales Order:** J38121182-IND-ZX | | |
|  | | |
| **Calibration Laboratory:** | LiSen Optics (Shenzhen) Calibration Laboratory  C# of 11th Floor, Kechuang Building of QuanZhi Science and Technology Innovation Park, Shajing Street, Bao'an District, Shenzhen City, P. R. China | |
|  |  | |
| **Description of Calibrated Itesm** | | |
| One integrating sphere sample, model iSphere-D1-PWR Laser Power Target, serial number LSIS-230609-001 | | |
| The recommended calibration interval is 12 months. The calibration period of this instrument/system begins on the date of receipt by the customer. | | |
| **Calibration** | | |
| Spectral Laser Power Calibration over the range 350~1100nm, reported at 10nm intervals in 350~1100nm | | |
|  | | |
| **Calibration environment conditions:** | | |
| Temperature: (23±3)℃ | | Humidity: (40±5)%RH |
|  | |  |
| The measurement equipment used for calibration is traceable to national standards of the members (NIM, NPL, PTB, NIST etc.).  Measurements which cannot be traced to national standards can be traced to natural constants, other accepted standards or relational measurements. | | |
|  | | |
| Additional documentation concerning traceability of the measurement equipment is available and can be examined upon request.  The certificate of calibration may only be forwarded in complete form without any changes. | | |

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| |  |  |  |  | | --- | --- | --- | --- | | Wavelength (λnm) | Responsivity (W/A) | Wavelength (λnm) | Responsivity (W/A) | | 350 | 6484.3419 | 540 | 1520.9120 | | 355 | 6289.5013 | 545 | 1495.7069 | | 360 | 6094.6607 | 550 | 1470.5017 | | 365 | 5781.4769 | 555 | 1447.4446 | | 370 | 5468.2930  有标好的PD系数与波长对应，一般都是10nm一个 | 560 | 1424.3876 | | 375 | 4981.4730 | 565 | 1407.5920 | | 380 | 4494.6531 | 570 | 1390.7963 | | 385 | 3928.2309 | 575 | 1372.4107 | | 390 | 3361.8087 | 580 | 1354.0251 | | 395 | 3023.8324 | 585 | 1338.4395 | | 400 | 2685.8561 | 590 | 1322.8540 | | 405 | 2576.5321 | 595 | 1310.1013 | | 410 | 2467.2081 | 600 | 1297.3486 | | 415 | 2407.5487 | 605 | 1282.5464 | | 420 | 2347.8892 | 610 | 1267.7441 | | 425 | 2313.7023 | 615 | 1256.6423 | | 430 | 2279.5154 | 620 | 1245.5406 | | 435 | 2248.0019 | 625 | 1233.4727 | | 440 | 2216.4884 | 630 | 1221.4048 | | 445 | 2174.0514 | 635 | 1211.9963 | | 450 | 2131.6144 | 640 | 1202.5877 | | 455 | 2091.9118 | 645 | 1185.0323 | | 460 | 2052.2092 | 650 | 1167.4768 | | 465 | 2025.5173 | 655 | 1167.0406 | | 470 | 1998.8253 | 660 | 1166.6045 | | 475 | 1970.9420 | 665 | 1158.1292 | | 480 | 1943.0588 | 670 | 1149.6540 | | 485 | 1900.3732 | 675 | 1143.0315 | | 490 | 1857.6876 | 680 | 1136.4089 | | 495 | 1818.5619 | 685 | 1128.6701 | | 500 | 1779.4362 | 690 | 1120.9312 | | 505 | 1737.4120 | 695 | 1114.1726 | | 510 | 1695.3877 | 700 | 1107.4140 | | 515 | 1659.5827 | 705 | 1100.4538 | | 520 | 1623.7776 | 710 | 1093.4935 | | 525 | 1594.2153 | 715 | 1084.1412 | | 530 | 1564.6529 | 720 | 1074.7890 | | 535 | 1542.7825 | 725 | 1069.2264 | |

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| |  |  |  |  | | --- | --- | --- | --- | | Wavelength (λnm) | Responsivity (W/A) | Wavelength (λnm) | Responsivity (W/A) | | 730 | 1063.6638 | 920 | 955.0292 | | 735 | 1056.3658 | 925 | 956.0564 | | 740 | 1049.0679 | 930 | 957.0835 | | 745 | 1041.9810 | 935 | 957.7214 | | 750 | 1034.8941 | 940 | 958.3593 | | 755 | 1030.9449 | 945 | 963.6405 | | 760 | 1026.9958 | 950 | 968.9216 | | 765 | 1022.1461 | 955 | 971.5950 | | 770 | 1017.2964 | 960 | 974.2685 | | 775 | 1014.3510 | 965 | 978.7523 | | 780 | 1011.4055 | 970 | 983.2361 | | 785 | 1007.3297 | 975 | 990.9797 | | 790 | 1003.2539 | 980 | 998.7232 | | 795 | 999.8676 | 985 | 1011.3586 | | 800 | 996.4813 | 990 | 1023.9940 | | 805 | 993.5124 | 995 | 1042.2108 | | 810 | 990.5435 | 1000 | 1060.4276 | | 815 | 994.0471 | 1005 | 1087.9075 | | 820 | 997.5506 | 1010 | 1115.3874 | | 825 | 996.1858 | 1015 | 1156.8910 | | 830 | 994.8209 | 1020 | 1198.3947 | | 835 | 992.0303 | 1025 | 1262.7631 | | 840 | 989.2396 | 1030 | 1327.1315 | | 845 | 985.9471 | 1035 | 1424.0264 | | 850 | 982.6546 | 1040 | 1520.9214 | | 855 | 980.5721 | 1045 | 1667.4059 | | 860 | 978.4896 | 1050 | 1813.8905 | | 865 | 974.7328 | 1055 | 2040.2023 | | 870 | 970.9759 | 1060 | 2266.5142 | | 875 | 967.0643 | 1065 | 2534.4469 | | 880 | 963.1527 | 1070 | 2802.3796 | | 885 | 961.3141 | 1075 | 3088.0554 | | 890 | 959.4755 | 1080 | 3373.7312 | | 895 | 958.8002 | 1085 | 3747.2030 | | 900 | 958.1248 | 1090 | 4120.6748 | | 905 | 957.0460 | 1095 | 4636.6162 | | 910 | 955.9673 | 1100 | 5152.5577 | | 915 | 955.4983 |  |  | |

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PD标好的系数与波长的曲线

|  |  |
| --- | --- |
| Calibrated by: | 陈培杰 |
| Date: | June 12, 2023 |