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|  IES-UPM | SUPPORTING DOCUMENTATION | Code: I-18 |
| | | Review:06 |
| | REQUIREMENTS OF SAMPLES | Pages: Page 1 of 1 |
| Intermediate Band Solar Cells and Materials Characterization Laboratory -Copy out of control- | | |

According with the characteristics of our equipments and the experience we have, IB-LAB has defined the following requirements of samples to be measured at our installations.

| Equipment / Technique | Size | Thickness | Type of materials | Metallization | Range of measurement |
|---------------------------|---------------|-----------|--|---------------|----------------------|
| Cryostat | <1cm Ø | <5mm | 2 terminal Semiconductor Devices | YES | 6K-298K |
| Photoreflectance | <0.5cmx0.5cm | <10mm | Semiconductor | NO | 400nm-2500nm |
| Quantum Efficiency | <4cmx4cm | <5mm | 2 terminal Semiconductor Devices | YES (grid) | 400nm-1700nm |
| I-V | <1cmx1cm | <5mm | 2 terminal Semiconductor Devices | YES | 100nA-1A |
| Flash | <1cmx1cm | <5mm | 2 terminal Semiconductor Devices | YES | 1uA-6A 10°C-50°C |
| FTIR | >1cmx1cm | <5mm | Semiconductor | NO | 800nm-20000nm |
| DLTS | <1cm Ø | <5mm | 2 terminal Semiconductor Devices | YES | 77K-330K |
| PL | > 0.5cmx0.5cm | <5mm | Semiconductor | NO | 300nm-2000nm |
| EL | < 0.5cmx0.5cm | <5mm | 2 terminal Semiconductor Devices | YES | 300nm-2000nm |
| PROFILER | < 10 cm Ø | < 30 mm | Non viscous material | - | 1 Å-1.2 µm |
| PLASMA ASHER | < 3 inches | < 1 inch | Any type of semiconductor but back side can't be viscous | - | Up to 200°C |

| ISSUES' CONTROL | | | |
|------------------------|-------------------|--------------------------------|------------------|
| | Elaborated | Reviewed and Authorized | Cancelled |
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