

LED LIGHTS-PRODUCT ASSEMBLING TRAINING SYLLABUS

SESSION	DESCRIPTION	
WEEK-1		
1	<p>1.Introduction about LED</p> <ol style="list-style-type: none"> 1) What is an LED? 2) Indicator lights 3) Illumination 4) What is the difference between indication and illumination? 5) Low power requirement 6) High efficiency 7) LEDs are <u>semiconductor</u> diodes 8) How much light do LEDs produce? <p>2.Types of LEDs</p> <ol style="list-style-type: none"> 1) Single color 5mm, etc –the very traditional LED package 2) High power Led 3) Surface mount LEDs 4) Bi-colour and multicolor LEDs 5) Multicolor LEDs 6) Flashing LEDs - with a small time integrated into the package 7) Alphanumeric LED displays..Etc., <p>3.LED Applications</p> <ol style="list-style-type: none"> 1) Residential 2) Commercial 3) Hospitality 4) Decorative 5) Airports 6) Corporate Campus 7) Healthcare 8) Industrial and Warehouse 9) Restaurant & Hotel 10) Roadways etc., <p>4. Requirement tools need for LED Manufacturing.</p> <ol style="list-style-type: none"> 1) Soldering Iron 2) Soldering Paste 3) De-soldering Wick 4) De-soldering Pump 5) Soldering Lead 6) Soldering Stand 7) IPA Thinner 8) Cleaning Brush 9) Screws 10) Screwdriver Kit 11) Magnifying Lamp with Lens 12) Tweaser Sets 13) Multimeter 	Tips / Practical

	14) Lux meter 15) Led Testing Demo Kit 16) Led Testing Power supply (1.5V to 35V/5Amps) 17) Cleaning Clothes	
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WEEK-2

2	<p>5.LED Raw-materials</p> <ol style="list-style-type: none"> 1) 1W White Led 2) Metal PCB 3) Led Housings and Led Casing 4) Plastic Cover and Diffuser 5) Heat sink /Thermal Paste 6) Teflon wire 7) Teflon tape 8) Wire sleeve 9) Insulation Tape 10) Led Driver (Power supply) <p>6. What is LED DRIVE?</p> <ol style="list-style-type: none"> 1) Explain the LED driver 2) How LED driver Works 3) What are the Components used in the driver 4) LED driver Block diagram explanation <p>7. What is SMPS?</p> <ol style="list-style-type: none"> 1) SMPS Block Diagram explanation 2) How SMPS Power supply works 3) Sections and Components are used in the SMPS 4) Fault finding and troubleshooting <p>8.Different types of LED Drivers</p> <ol style="list-style-type: none"> 1) LED Driver is as a power supply 2) Simple power Supply 3) Half Wave Rectifier circuit 4) Full Wave Rectifier circuit <p>9.Types of LED Fittings</p> <ol style="list-style-type: none"> 1) LED Bulb Holder 2) Lock type B22 Bayonet Cap Indian Lock Type 3) E27 (Thread type) E27 Indian Screw Type 4) Adopter B22 to E27 Indian type to Screw type Energy 5) Adopter B27 to E22 Indian type to Screw type Energy 6) Adopter E14 to B22 Indian type to Screw type Energy <p>10.Design of the Metal PCB</p> <ol style="list-style-type: none"> 1) 3W LED Aluminum MCPCBs (Metal Core PCB) 2) 5W LED Metal PCB 3) 9W Small LED Metal PCB 4) 9W Medium LED Metal PCB 5) 7W aluminum small/medium/large metal PCB 6) 12W LED Metal PCB etc., 	Practical
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	11. Thermal Decimation Methods 1) Aluminum Metal PCB 2) Aluminum Metal Casing 3) Thermal paste 4) Thermal heat sink tape 5) Teflon wire 6) Teflon sleeve etc.,	
WEEK-3		
3	12. LED Bulbs Manufacturing-Practical 1) 3W LED AC Lamp Manufacturing 2) 5W LED AC Lamp Manufacturing 3) 3W Ceiling down Light Manufacturing 4) 3W Ceiling down Cup Light Manufacturing 5) 10 to 15W Ceiling down Focus Light Manufacturing 6) 3W Spot Light Manufacturing 7) 15 to 20W Focus Light/Flood Light/High Bay Light Manufacturing 8) 12W Street Light Manufacturing 9) 18W Street Light Manufacturing 10) 12 W Solar Street Light DC Manufacturing 11) 10W Two feet Tube Light Diffused Manufacturing	Practical

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