McDry DRY STORAGE CABINETS (1%RH)

Store IC packages and LEDs in a dry box at 5%RH or less for indefinite floor life! (IPC/JEDEC)

DXU-1001, 1%RH
1200L

Problem

When chip LEDs are left on the pick and place, they will absorb moisture from the atmosphere and popcorn due to heat expansion in the reflow process.

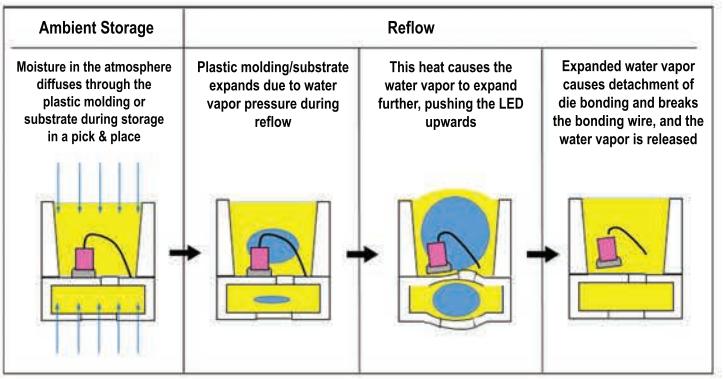
Solution

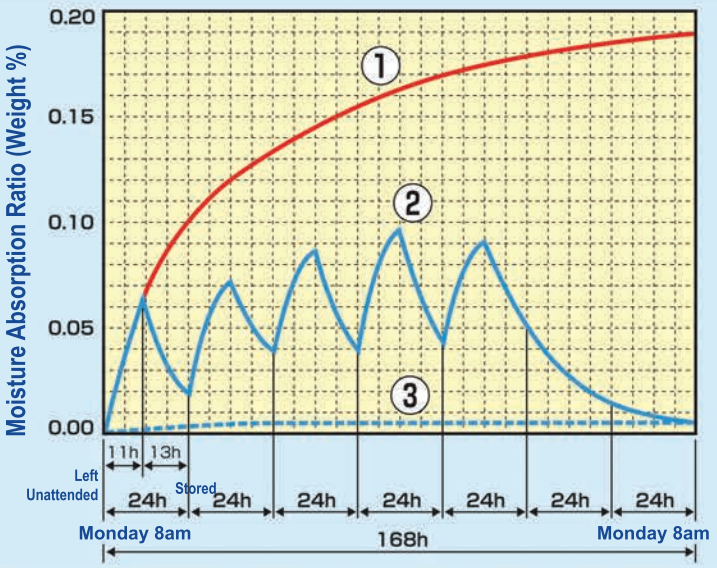
Storing LEDs in a feeder storage dry cabinet

The floor life can be stopped when chip LEDs are stored in a dry cabinet capable of maintaining 5%RH or less by following the IPC/JEDEC J-STD 033C guidelines. By storing the LED components on tape and reel in a dedicated feeder storage cabinet, it is a safe and easy to maintain option.

DXU-580, 1%RH
Feeder Storage Cabinet

Popcorning or microcracking of chip LEDs due to moisture absorption





Experiment

Data on moisture absorption and dehumidification of chip LEDs

Example: LED3025 (3.0mm×2.5mm×t1.3mm)
floor life 168h
Pretreatment: 48 hour-Baking Process at +60C
(LED makers' baking guideline)

① Chip LED stored in ambient environment (30°C, 60% RH) for 168 hours.
② After 11 hours of storage in this environment, it was left for 13 hours in a dry box at <3% RH.
This process was repeated 5 times from Monday to Friday and left for 61 hours in a dry box at <3% RH.
③ After baking, the LED chip was stored in a dry cabinet capable of maintaining 3%RH.

(This is a similar condition with an LED chip that is stored in a dry cabinet right after opening a moisture barrier bag.)

SEIKA
San Francisco Office & Demo Center | 26218 Industrial Blvd. - Hayward, CA 94545
Telephone: 510-293-0580 | Fax: 510-293-0940 | www.seikausa.com