

Lamp Packaging Guidelines

There are several variables that can affect the efficiency and lessen the probability of breakage during shipment of mercury-containing lamps. Adherence to the following packaging procedures will reduce breakage and lessen the probability of assessed charges.

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Packaging Guidelines: Corrugated/OEM Boxes

Original equipment manufactures (OEM) and NLR Contractor boxes may be utilized to ship linear fluorescent lamps. Two, four and eight-foot lamps may be packaged in either box. Both boxes are constructed of corrugated cardboard and will allow for maximum performance and stability.

- Any box that appears to be exposed to the elements of weather will be refused.
- Open boxes will not be accepted.
- Boxes must be closed on all sides to prevent breakage
- NO TAPE is to be used on lamps to secure. If used, additional charges will accrue.



NLR Contractor



OEM

Linear Fluorescent Lamps

It is not necessary to utilize paper or excess cardboard when packaging lamps in boxes unless it is not full. When packaging, do not mix different diameter lamps in boxes. All boxes should contain the same diameter lamp. If box appears to be unsteady or in poor condition, then do not use.



| Box Style | Size: 2' & 4' | Size: 8' |
|----------------|-------------------|-------------------|
| OEM | 30 to 35 (T8-T12) | 15 to 20 (T8-T12) |
| NLR Contractor | 100-T8 or 50-T12 | 60-T8 30-T12 |

CFLs (Compact Fluorescent Lamps)

OEM boxes can safely secure different quantities of compact fluorescent lamps depending on the type, style and wattage (ie. twin-tube, quad style, 9 watt vs 12 watt etc.). Place lamps inside box making sure that lamps are laid horizontally to ensure stability. If the box is not full, use excess cardboard or newspaper to prevent movement and breakage during handling and transportation.



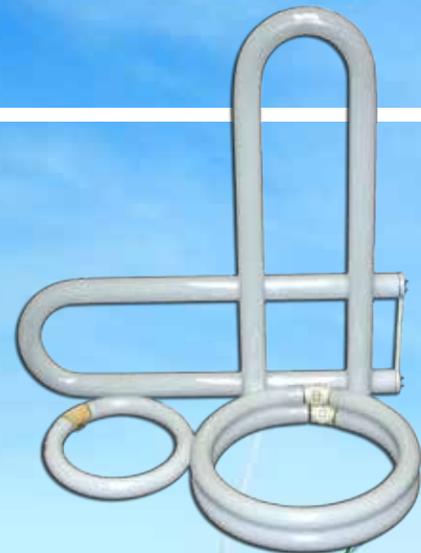
HID Lamps

HID lamps include metal halide, mercury vapor and high-pressure sodium types. Because of the variance in design, wattage determining size and other factors, the determination in quantities of lamps per package and packaging layout will vary. NLR requires that all HID's be placed in one box or container. If the box is not full, use excess cardboard or newspaper to prevent movement and breakage during handling and transportation.



U-Tubes & Circular Lamps

OEM boxes can hold up to 12 U-shaped fluorescent lamps. After box is packaged, tape all openings and any areas, which contain perforation or openings. If less than 12 lamps are placed in box, use excess cardboard or newspaper to secure.



Packaging Guidelines: Fiber & Metal Drums

NLR can supply the lamp generator with fiber drums for packaging of linear fluorescent lamps and 55-gallon metal drums for the packaging of crushed lamp glass.

Fiber Drums*

NLR fiber drum is a cylindrical shape and is constructed of fiber cardboard. The fiber drum is used exclusively for 4' or 8' lamps. Each waste stream has a container specific to its length.



4' Fluorescent Lamps

There are two size 4' containers that are utilized depending upon the quantity of waste that is being generated. Approximately 170 4'-T12 or 330 4'-T8 lamps will fit into the larger diameter container.

The smaller diameter container has a capacity of 85 4'-T12 or 170 4'-T8 lamps.

8' Fluorescent Lamps

The container that is utilized is telescopic and can expand from a height of 5' to 8'. Although 8' lamps are the more common type this container can be used for any lamp that is in excess of 4'. The capacity is approximately 85 8'-T12 or 170 8'-T8 lamps.



*All fiber drums are currently in the process of being phased out in favor of 4' & 8' corrugated box containers (NLR Contractor Boxes). These containers will be more readily available & offer customers greater flexibility for storage needs.

Rocon Container

The rocon container is utilized for any non-linear type of lamp such as HID's U-styles and circlelines, compact fluorescents and many other styles. The average capacity of the container is approximately 30 U-style lamps or 85 - 400 watt HID lamps. Although there are numerous wattages, the maximum quantity can therefore be reduced.



Steel 55-Gallon Metal Drum

NLR provides this container for transportation of broken Mercury-Containing Lamps (ie Compact Fluorescent, HID's, U-Lamps). Secure all broken product within container and seal and lock lid.



Additional Guidelines

When inserting lamps in drum, care should be taken to prevent any breakage. Do not force lamp or over stack container. To ensure ease of handling, package drum in the upright position. When drum is full, apply lid and secure. Do not utilize any cardboard or paper to secure lamps in drum.

LAMP PACKAGING GUIDELINES

Please follow proper packaging guidelines to ensure no delays in processing your orders or incurring additional charges.

If you need further assistance please contact your NLR sales representative.

Unacceptable Lamps & Packaging

- Taped Lamps
- Broken Lamps
- Lamps in Wrong Size Containers
- Damaged Containers
- Non-Lamp Items
- No Container Lid



40 CFR Part 273.13(d) Federal Packaging Regulations:

(1) A small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(2) A small quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

Items received that are not in compliance will be subject to a \$75.00 per hour handling charge (1 hour minimum)

NLR, Inc. • 4 Revay Road • East Windsor, CT 06088

Tel: 860.292.1992 • Fax: 860.292.1114

info@nlr-green.com • www.nlr-green.com

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