ICRC	Process:	Quality Control		Document ID:	TSLOG-16-85722
	Category:	Global		Document Status:	Approved
	Document type:	Instruction	Title: AQL- Solar Lamp	Effective date:	02.02.2023
	Language:	English		GDP related:	No
	IHT:	Internal		Version:	7,0

Definitions:

Critical nonconformity : Any discrepancy which might harm a user or makes it impossible to use the product properly is considered to be critical. Lots with Critical discrepancies is subject to lot refusal.

Major nonconformity : Any discrepancy which makes the use of the product less efficient than expected is considered to be major. Lot with Major discrepancies can be accepted.

Minor nonconformity : Any discrepancy which does not have an influence on the performance of the product is considered to be minor. Lot with Minor discrepancies can be accepted.

Nonconformity: Non-fulfilment of a specified characteristic requirement.

Nonconforming item: Item with one or more nonconformities.

Lot: Definite amount of some product, material or service, collected together

Sample: Set of one or more items taken from a lot and intended to provide information on the lot

Non-Conformities and Corrective Action:

Critical: (AQL 0)

Determination of lot acceptability: to be decided by ICRC' Quality and buyers.

Continual improvement: Improvement plan to be proposed by supplier and validated by the ICRC to eliminate the root cause of occurence and non detection for the faced non-conformity (ies) for the upcoming purchases. Actions to be implemented by supplier within a defined time frame by default 3 months.

Penalty: 10% penalty of the value of the total PO per each critical non-conformity to be charged to the supplier .

Major: (AQL 4.0)

Determination of lot acceptability: to be decided by ICRC' Quality and buyers.

Continual improvement: Improvement plan to be proposed by supplier and validated by the ICRC to eliminate the root cause of occurence and non detection for the faced non-conformity (ies) for the upcoming purchases. Actions to be implemented by supplier within a defined time frame by default 3 months.

Penalty: 0.5% penalty of the value of the total PO per each major non-conformity to be charged to the supplier.

Minor: (AQL 6.5)

Determination of lot acceptability: to be decided by ICRC' Quality and buyers.

Continual improvement: Improvement plan to be proposed by supplier and validated by the ICRC to eliminate the root cause of occurence and non detection for the faced non-conformity (ies) for the upcoming purchases. Actions to be implemented by supplier within a defined time frame by default 3 months.

Penalty: 0.25% penalty of the value of the total PO per each minor non-conformity to be charged to the supplier.

Additional Information:

The Method of testing is drawn from ISO-2859-1 International Standards (table1: Sample size code letters, and table 2-A: Single sampling plans for normal inspection). The samples will be taken randomly by the buyer from the delivered items and then inspected.
The buyer can decide either to inspect the lot at ICRC QC laboratory or to use an inspection company for analysis, or both. Transport to laboratory and analysis cost for lab testing are at expense of ICRC.
The seller can contest the results of the Quality Control done at ICRC warehouses by requesting a lab testing. In this case transport to laboratory and analysis cost for lab testing are at expense of the seller.
In case the ICRC decides to hold the penalties during the improvement plan, if the faced nonconformity(ies) persist ; penalty for each non-conformity faced during the improvement plan will be applied.

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Nonconformities classification: Critical: **C**; Major: **M**; Minor: **m**

Items	Characteristics	Nonconformities Classification	QC type	AQL	QC Inspection at ICRC warehouses and lab testing
Boxes	Marking on the primary packaging (individual carton box)	**m**	Ok/Nok	6,5	Marking and language to be validated by the ICRC for each Purchase order. Standard marking expected: recommendation to recycle batteries + picture of the lamp + instruction on lamp usage.
	Packaging of the primary packaging (individual carton box)	**m**	Ok/Nok	6,5	Packed in an individual strong recycled cardboard box, Items to not be wrapped in single use plastics IATA packaging compliant with lithium-ion batteries regulation.
	Marking on secondary packaging (marking on the carton box)	**m**	Ok/Nok	6,5	Marking and language to be validated by the ICRC for each Purchase order. Standard marking clearly marked on 2 sides of the carton: International Committee of the Red Cross; Solar lamps; Total weight: ; Purchase order Number: Label must remain readable after minimum 10 handlings. No supplier logo allowed
	Secondary packaging, box sealing.	**m**	Ok/Nok	6,5	Box is well sealed with large adhesive tape (50 mm Minimum), secured with 2 traps.
	Secondary packaging, box general quality	**m**	Ok/Nok	6,5	Wrapped in soft cardboard for protection, Export-quality 5 ply recycled cardboard strong enough to withstand multiple handling and stacking up to 6 m . No holes, no tears.
	Secondary packaging, quantity per parcel	**m**	Ok/Nok	6,5	As per purchasing contract. Standard 10 lamps per parcel.
Specifications	Rechargeable	**C**	Ok/Nok	0	Rechargeable by solar panel and 220 V (cable and charger must be provided with the lamp, charger can be integrated or separate)
	Battery type	**C**	Ok/Nok	0	Rechargeable lithium-ion batteries only.
	General quality	**M**	Ok/Nok	4,0	Up to the highest industry standards
	Connectors	**C**	Ok/Nok	0	Female Micro-USB inlet for connecting the solar panel or the charger
	Features	**M**	Ok/Nok	4,0	3 positions only, high beam, medium beam and low beam
	Material	**M**	Ok/Nok	4,0	Casing made of shockproof plastic
	Waterproof	**M**	Ok/Nok	4,0	Rain resistant
	Charge cycles	**M**	Ok/Nok	4,0	Low Self Discharge, 500+ charges
	Battery protection	**C**	Ok/Nok	0	Automatic protection against deep battery discharge and overcharge
	Light output angle	**C**	Ok/Nok	0	360 degrees, omnidirectional
	Total Lux	**M**	Measurable	4,0	See table below
	Solar panel	**C**	Ok/Nok	0	Separate (with a 3m cord with male Micro-USB connector to connect to the Micro-USB inlet of the lamp or to charge a mobile phone).
	Time to fully charge	**M**	Measurable	4,0	12h maximum bright sun light.
	Charging outlet (USB-A) performances	**M**	Measurable	4,0	Outlet minimum voltage with no load: 5V Outlet minimum current with load: 0.4A at 4.5V Outlet minimum available energy: 3.5Wh Outlet minimum available energy after 4 hours charge starting from 100% discharged battery: 1Wh
	Charging indicator	**M**	Ok/Nok	4,0	Charging indicator on the body of the lamp. Red light LED during the charging period that shifts to green automatically when battery is fully charged.
	Suspension system	**C**	Ok/Nok	0	Foldable handle, hook, strap or other mechanism to suspend the lamp e.g. from tent pole or branch.

General information

Weather proof and shockproof solar lamp. This lamp is meant for distribution as an Essential Household Item, for family usage.

Time to charge: 12 hours sun light.

Rechargeable lithium-ion batteries only.

Lithium-ion requires declaration for transport of dangerous goods, under UN3481.

Lifespan: 2 years minimum in daily use.

Shelf life: 5 years when kept in original packaging between -10°C and 50°C. The lights are delivered with partially charged batteries, it is recommended to re-charge the batteries before use to insure full maximum power. When stored fully charged, the batteries will hold charge for approximately 1 year, slowly discharging.

Specifications

Lamp, solar:	Rechargeable by solar panel and 220 V (cable and charger must be provided with the lamp, charger can be integrated or separate)
General quality:	Up to the highest industry standards.
Connectors	Female USB outlet, to charge a mobile phone. Female Micro-USB inlet for connecting the solar panel or the charger
Features:	2 positions only, high beam and low beam. Battery charging indicator light
Material:	Casing made of shockproof plastic
Waterproof:	Rain resistant
Charge cycles:	Low Self Discharge, 500+ charges
Battery protection:	Automatic protection against deep battery discharge and overcharge
Light output angle:	360 degrees, omnidirectional
Total Lux:	See table below
Solar panel:	Integrated or separate (with a 3m cord with male Micro-USB connector to connect to the Micro-USB inlet of the lamp or to charge a mobile phone).

Time to fully charge:	12h maximum bright sun light
Charging outlet (USB-A) performances:	Outlet minimum voltage with no load: 5V
	Outlet minimum current with load: 0.4A at 4.5V
	Outlet minimum available energy: 3.5Wh
	Outlet minimum available energy after 4 hours charge starting from 100% discharged battery: 1Wh
Fixation system:	Foldable handle, hook, strap or other mechanism to suspend the lamp e.g. from tent pole or branch.
Packaging:	Wrapped in soft cardboard for protection (no
	ll plastic bags), packed in an individual strong cardboard box.
	IATA packaging compliant with lithium-ion batteries regulation.
Marking:	recommendation to recycle batteries

Brightness test	
High brightness (duration test: 3 hours). Charging time: 12 hours. Unit: Lux	
Minimum average brightness at full light at beginning:	28
Minimum average brightness at full light after 2h:	17
Minimum average brightness at full light after 3h:	9
Low brightness (duration test: 6 hours). Charging time: 12 hours. Unit: Lux	
Minimum average brightness at low light after 4h:	5
Minimum average brightness at low light after 6h:	2

Measuring conditions:

For both low and high brightness, the sensor is placed at 1m distance from the lamp, on the same surface where the lamp is standing.