



3/12/2026

# LED NEON FLEX FACTORY AUDIT CHECKLIST

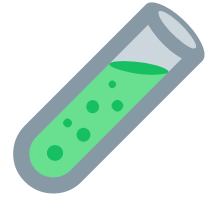
A 30-Point Inspection Sheet for B2B Buyers  
Sourcing Silicone LED Neon Flex from China  
2026 Edition — Compiled by NPHIS LED QC  
Engineering Team

# Why This Checklist Matters

Sourcing silicone LED neon flex from China can save 30–50% on costs, but only if you select the right manufacturer. Industry data from LEDinside (2025) shows that 38% of B2B buyers experience quality issues within the first 12 months when sourcing from unverified suppliers. This 30-point checklist is the same internal QC framework used by NPHIS LED's quality engineering team for incoming material, in-process inspection, and pre-shipment audits. Use it to:

- Pre-screen Chinese suppliers before sample requests
- Conduct on-site or remote video factory audits
- Standardize your incoming-goods inspection (IQC)
- Validate pre-shipment quality (FRI / Final Random Inspection)





# SECTION B — Raw Material Quality (5 points)

#	Audit Item	Pass / Risk / Fail	Notes
6	Silicone jacket — industrial-grade, Shore A 60–70, supplier disclosed (e.g., Wacker, Dow, Shin-Etsu)	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-----
7	LED chip brand specified (Epistar, San'an, Cree, Nichia, Lumileds) — not "compatible" or unbranded	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-----
8	PCB copper thickness $\geq$ 1 oz (35 $\mu$ m) — request cross-section photo	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-----
9	Anti-yellowing additive in silicone formula (UV stabilizer) — confirmed in writing	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-----
10	Solder paste is lead-free, RoHS-compliant (SAC305 standard)	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-----







# SECTION E — Durability & Environmental Testing (5 points)





#	Audit Item	Test Standard	Pass / Risk / Fail
21	IP67 / IP68 waterproof test report from third-party lab (TÜV / SGS / Intertek)	IEC 60529	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ! <input type="checkbox"/> <input checked="" type="checkbox"/>
22	UV chamber test — 1,000 hrs no visible yellowing ( $\Delta E \leq 3$ )	ASTM G154	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ! <input type="checkbox"/> <input checked="" type="checkbox"/>
23	Bending fatigue test — 100 cycles at minimum bend radius	Internal SOP	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ! <input type="checkbox"/> <input checked="" type="checkbox"/>
2 4	Salt spray test — 48 hrs (for coastal projects)	ASTM B117	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ! <input type="checkbox"/> <input checked="" type="checkbox"/>
2 5	Flame retardancy UL94 V-0 rating (silicone jacket)	UL 94	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> ! <input type="checkbox"/> <input checked="" type="checkbox"/>











# Final Scoring & Decision Matrix

Add up your  Pass scores across all 30 items:





Total Score	Supplier Rating	Recommended Action	Total Score
27 – 30	 Tier-1 Manufacturer	Proceed with sample order + bulk PO	27 – 30
24 – 26	 Tier-2 – Acceptable	Negotiate improvements + start with small trial order	24 – 26
18 – 23	 Tier-3 – High Risk	Request third-party inspection (SGS / BV) before any order	18 – 23
Below 18	 Disqualify	Do not engage – switch supplier	Below 18

-  Top 5 Deal-Breakers (Auto-Disqualify if any FAIL)
-  No valid business license / virtual office only
-  No third-party IP67/IP68 test report
-  No LM-80 / TM-21 lumen maintenance data
-  Refuses third-party (SGS / BV / Intertek) inspection
-  No written warranty terms

# Need Help Auditing Your Shortlisted Suppliers?

NPHIS LED's QC engineering team has audited 200+ Chinese LED factories since 2015. We offer:



-  Free consultation call for your sourcing project
-  Free sample box — test luminous uniformity, IP rating, bending performance in your own lab
-  Custom OEM/ODM silicone neon flex with 3–5 year warranty
-  Factory video tour on demand

 Contact NPHIS LED

 Website: [www.nphis-led.com](http://www.nphis-led.com)  Email: [ted@nphis-led.com](mailto:ted@nphis-led.com)

 WhatsApp / WeChat: +8613681792218

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