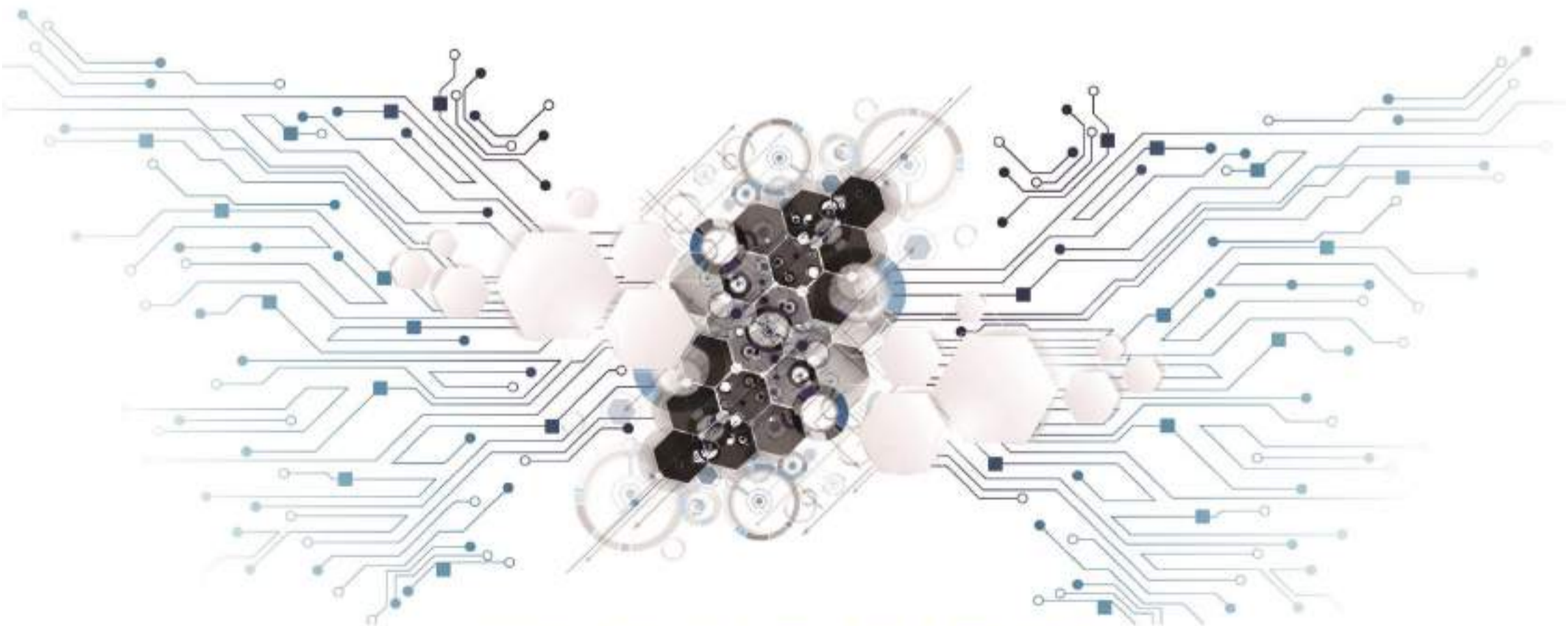




Jiangmen Longxing Electronic Materials Co., Ltd.



MAKE THINGS BETTER



江门市龙兴电子材料有限公司  
Jiangmen Longxing Electronic Materials Co., Ltd.

# Company Profile

Longxing Electronic Materials Group, established in 2004, is a comprehensive CCL enterprise integrating R&D, production, sales and service. The group's subsidiaries include Jiangmen Longxing Electronic Materials Co., Ltd., Shenzhen Longxing Electronic Materials Co., Ltd., Fuzhou Longxing Electronic Materials Co., Ltd., etc. With strong research and development capabilities, well-known consultant teams in the industry and leading technical strength, we can provide personalized services according to customers' actual needs.

The main products are FR-4 single and double-sided copper clad laminates, metal-based copper clad laminates, insulating boards, carbon fiber boards, etc. Product application fields include: LED industry, electronic appliances, automobiles, 5G, new energy vehicle battery energy storage industry, new energy-solar photovoltaic industry, machinery manufacturing, mobile computer and mobile phone accessories, etc.

With a complete set of advanced production testing and experimental equipment, adopting international advanced standards, continuous innovation, our quality has reached the international advanced level which is in line with IPC-4101 specifications and comply with UL, RoHS, REACH, SGS and CQC certificate as well.

In order to adapt to the new request of sustainable development, Longxing is making every effort to exploit new products those are market-oriented and delicate in quality. We are now facing market challenges with a brand-new image as well as a renewed system, ready to make our own contributions to the electronic industry.



## Copper Clad Laminates



Model: LX201 / LX202 / LX2011 / LX2012



### FEATURES

- *Superior Heat Dissipation*
- *Excellent Thermal Reliability and Insulation Reliability*
- *Excellent Mechanical Processability*



## FR-4 Insulation Material

*FR-4 Epoxy Laminates:*

*Strong mechanical properties and stable electrical performance.*

*Suitable for high insulation structural parts of machinery, electrical, appliances and electronics.*

*High mechanical and dielectric properties and good heat and moisture resistance.*



## FEATURES

### Toughness

- *Property of Flame Retardance*
- *Good Heat Resistance*
- *Good Moisture Resistance*



### Dielectric

- *High Dielectric*
- *High Mechanical Properties*



### Bending Resistance

- *Excellent bending strength*
- *Under high temperature*



### Environmental Protection

- *Safe*
- *Non-toxic*
- *Odorless*



*Environmental*



*High-intensity quality inspection*

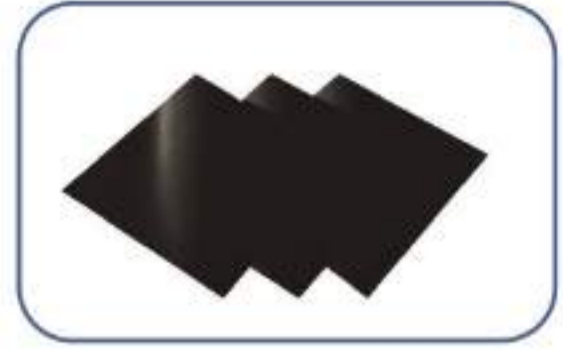


*A-class fire protection requirements*



*Economical Durable*

# Fiberglass Epoxy Insulation Laminates



## Application



## Technical Data Sheet

龙兴电子 产品编号 Longxing Electronic Grade		LX-FR-4	
国际电工/英国标准 IEC 893/EN 60893 Grade		EPGC 202	
美国(国际电气)标准 ANS(NEMA)Grade NEMA Li-1		FR-4	
德国标准 DIN 7735		Hgw2372.1	
日本标准 JIS Grade		EL-GEF	
项目 Item	测试方法 Test method	单位 Unit	典型数值 Typical Values
物理性能 Physical Properties	颜色 Color	目测 Visual inspection	-- 水绿色/黄色 Light Green/Yellow
	比重 Specific Gravity	IEC 60893-2:2003	g/cm <sup>3</sup> 1.90-2.15
	吸水率 Water absorption	ISO 62:2008	% <0.3
电气性能 Electrical Properties	电气强度(垂直) Electric strenght ⊥	IEC 60893-2:2003	KV/mm ≥14(3.0mm)
	击穿电压(平行) Breakdown Voltage //	IEC 60893-2:2003	KV ≥60
	体积电阻率 Volume Resistivity	IEC 60893-1980	Ω.m ≥1.0*10 <sup>12</sup>
	表面电阻率 Surface Resistivity	IEC 60893-1980	Ω ≥1.0*10 <sup>14</sup>
	介电常数(1 MHz)Dielectric constant	IEC 60893-2:2003	-- 4.0-5.5
	介质损耗因数(1 MHz)Dissipation Factor	IEC 60893-2:2003	-- 0.04-0.05
	耐电痕化指数PTI Proof Tracking Index PTI	IEC 60893-2:2003	V ≥200
机械性能 Mechanical Properties	浸水24H后绝缘电阻 Insulation resistance after immersion 24Hrs in water	IEC 60893-2:2003	Ω ≥5*10 <sup>10</sup>
	垂直层向 翘曲强度 Flexural Strength ⊥	IEC 60893-2:2003	MPa ≥340
	平行层向 冲击强度(简支梁)Charpy Impact strength //	IEC 60893-2:2003	KJ/m <sup>2</sup> ≥60
	拉伸强度 Tensile Strength	IEC 60893-2:2003	MPa ≥300
	粘结强度 Bond Strength //	IEC 60893-3-4:2003	N ≥8000
燃烧性能 Flame Resistance Properties	垂直层上 压缩强度 Compressive Strength ⊥	IEC 60893-2:2003	MPa ≥350
	阻燃性 Flame resistance	IEC 60893-2:2003	-- V-0
	温度指数 Temperature Index	IEC 60085:2004	℃ 155
其它 Others	毒素含量 Toxicant Content	E662	-- 低 Low
	抗丙酮 Acetone Resistance	Boiled	Min 30(OK)

# Workshop/Equipment



**Quality management system**  
**Certificate of Certification**

**Awarded to** Jiangmen Longxing Electronic Materials Co., Ltd.  
 Registered address: No. 241, Chaolian Avenue, Pingshi District, Jiangmen City, Guangdong Province, China  
 Office address: No. 241, Chaolian Avenue, Pingshi District, Jiangmen City, Guangdong Province, China  
 Production address: No. 241, Chaolian Avenue, Pingshi District, Jiangmen City, Guangdong Province, China

Quality Management System of the above-mentioned Organization  
 Approved by Beijing Zhongyuanzhongyuan Certification Co., Ltd.  
 Meet the requirements of GB/T19001-2016 idt ISO9001:2015 standard applicable provisions

**Certification scope/Registration scope**  
 Copper-clad plate, insulation board production

This certificate is valid for three years  
 From September 26, 2021 to September 25, 2024

Beijing Zhongyuanzhongyuan Certification Co., Ltd.  
 No. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

**SGS**

**Test Report** No. CANGC2213965701 Date: 04 Jul 2022 Page 1 of 8

Client Name: JIANGMEN LONGXING ELECTRONIC MATERIALS CO., LTD  
 Client Address: NO.241,CHAOLIAN AVENUE,JIANGMEN

Sample Name: Epoxy fiberglass board  
 Model No.: FR-4  
 The above sample(s) and information were provided by the client.

SGS Job No.: C722-036883 - GZ  
 Date of Sample Received: 29 Jun 2022  
 Testing Period: 29 Jun 2022 - 04 Jul 2022  
 Test Requested: Selected test(s) as requested by the client.  
 Test Method(s): Please refer to next page(s).  
 Test Result(s): Please refer to next page(s).  
 Conclusion: Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Diethyl benzyl phthalate (DEBP), Dibutyl phthalate (DBP), and Dioctyl phthalate (DOP) comply with the limits as set by RoHS Directive (EU) 2011/65/EU amending Annex II to Directive 2002/95/EC.

Signed for and on behalf of  
 SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

*Alvin Chen*  
 Vice-Chief  
 Approved Signatory

QR code and SGS logo

**POCE** Shenzhen POCE Technology Co., Ltd.  
 H Building, Hongli Science and Technology Park,  
 Tangzhen, Shiyao, Bao'an District, Shenzhen, China

**CERTIFICATE OF CONFORMITY**

Certificate No.: PXCE2207270607CR  
 Applicant: Jiangmen Longxing Electronic Materials Co., Ltd.  
 Address: Building 1&2, No.241, Chaolian Avenue, Pingshi District, Jiangmen, Guangdong, China  
 Manufacturer: Jiangmen Longxing Electronic Materials Co., Ltd.  
 Address: Building 1&2, No.241, Chaolian Avenue, Pingshi District, Jiangmen, Guangdong, China  
 Product: Fiberglass Epoxy Insulation Laminates  
 Trade Name: N/A  
 Model(s): 1.0mm, 0.2mm, 0.3mm, 0.4mm, 0.5mm, 0.6mm, 0.8mm, 1.2mm, 1.5mm, 1.8mm, 1.9mm, 1.9mm, 2.0mm, 2.2mm, 2.3mm, 3.0mm, 4.0mm, 5.0mm, 6.0mm, 7.0mm, 8.0mm, 10.0mm, 12.0mm, 14.0mm, 15.0mm, 16.0mm, 18.0mm, 20.0mm, 25.0mm  
 Test Report No.: PXCE2207270607CR  
 Test Standards: IEC 62321-3-1:2015; IEC 62321-4:2015+A1:2017; IEC 62321-5:2015; IEC 62321-6:2015; IEC 62321-7-1:2015; IEC 62321-7-2:2017; IEC 62321-8:2017

The EUT described above has been tested by us with the listed standards and found in compliance with the council RoHS Directive(EU) 2011/65/EU amending Annex II to Directive 2002/95/EC. It is possible to use CE marking to demonstrate the compliance with this RoHS Directive.

RoHS logo and CE marking

Signature and Date: Aug. 02, 2022

QR code and POCE logo

**CQC** PRODUCT CERTIFICATION

CERTIFICATE NO.: CQC2204279662 Valid from May 03, 2022 Valid until May 11, 2024

NAME AND REGISTERED ADDRESS OF THE APPLICANT: Jiangmen Longxing Electronic Materials Co., Ltd. Factory Building 47, Chaolian Avenue, Pingshi District, Jiangmen City

NAME AND REGISTERED ADDRESS OF THE MANUFACTURER: Jiangmen Longxing Electronic Materials Co., Ltd. Factory Building 47, Chaolian Avenue, Pingshi District, Jiangmen City

NAME AND LOCATION OF THE FACTORY: Jiangmen Longxing Electronic Materials Co., Ltd. No.241,Chaolian Avenue,JIANGMEN

PRODUCT NAME, MODEL AND SPECIFICATION: CCL-40-42 (L25) Fiberglass/Epoxy 3.2mm Reinforced PCB Substrate Analytical Differential Bonding Catechology(DSG), Thermoplasticity (TG) to use epoxy resin(CB-2008-5)

THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS: GB/T 4753-2002, GB/T 3940-1981, ISO 11358-1:2014, GB/T 34463-2004, GB/T 34463-2004, GB/T 34463-2004

TYPE OF CERTIFICATION SCHEMES: type 1 and follow up factory inspection

This is to certify that the above mentioned product(s) complies with the requirements of certificate no. CQC2204279662. The validity of the certificate is subject to positive result of the regular follow up inspection by issuing institution body until the expiry date.

Signature and Date: 8/2/2022

QR code and CQC logo