

$L_3(7).3 \pmod{2}$

| | blocks | defect | matrix |
|---------|-----------------|--------|--|
| $G :$ | 1 | 5 | 12×3 |
| | 2 | 5 | 12×3 |
| | $3 = \bar{2}$ | 5 | 12×3 |
| | 4 | 2 | 4×1 |
| | 5 | 0 | $288_1 = \chi_{7,0}, \varphi_{6,0}$ |
| | 6 | 0 | $288_2 = \chi_{7,1}, \varphi_{6,1}$ |
| | 7 | 0 | $288_3 = \chi_{7,2}, \varphi_{6,2}$ |
| | $8 = \bar{5}$ | 0 | $288_4 = \chi_{8,0}, \varphi_{7,0}$ |
| | $9 = \bar{7}$ | 0 | $288_5 = \chi_{8,1}, \varphi_{7,1}$ |
| | $10 = \bar{6}$ | 0 | $288_6 = \chi_{8,2}, \varphi_{7,2}$ |
| | 11 | 0 | $288_7 = \chi_{9,0}, \varphi_{8,0}$ |
| | 12 | 0 | $288_8 = \chi_{9,1}, \varphi_{8,1}$ |
| | 13 | 0 | $288_9 = \chi_{9,2}, \varphi_{8,2}$ |
| | $14 = \bar{11}$ | 0 | $288_{10} = \chi_{10,0}, \varphi_{9,0}$ |
| | $15 = \bar{13}$ | 0 | $288_{11} = \chi_{10,1}, \varphi_{9,1}$ |
| | $16 = \bar{12}$ | 0 | $288_{12} = \chi_{10,2}, \varphi_{9,2}$ |
| | 17 | 0 | $288_{13} = \chi_{11,0}, \varphi_{10,0}$ |
| | 18 | 0 | $288_{14} = \chi_{11,1}, \varphi_{10,1}$ |
| | 19 | 0 | $288_{15} = \chi_{11,2}, \varphi_{10,2}$ |
| | $20 = \bar{17}$ | 0 | $288_{16} = \chi_{12,0}, \varphi_{11,0}$ |
| | $21 = \bar{19}$ | 0 | $288_{17} = \chi_{12,1}, \varphi_{11,1}$ |
| | $22 = \bar{18}$ | 0 | $288_{18} = \chi_{12,2}, \varphi_{11,2}$ |
| $3.G :$ | 23 | 5 | 12×2 |
| | 24 | 5 | 12×2 |
| | 25 | 5 | 12×2 |
| | $26 = 23^*$ | | |
| | $27 = 25^*$ | | |
| | $28 = 24^*$ | | |
| | 29 | 0 | $288_{19} = \chi_{25+}, \varphi_{14+}$ |
| | $30 = 29^*$ | | |
| | 31 | 0 | $288_{21} = \chi_{28,0}, \varphi_{17,0}$ |
| | 32 | 0 | $288_{22} = \chi_{28,1}, \varphi_{17,1}$ |
| | 33 | 0 | $288_{23} = \chi_{28,2}, \varphi_{17,2}$ |

| | blocks | defect | matrix |
|--|-----------------|--------|--|
| | $34 = 31^*$ | | |
| | $35 = 33^*$ | | |
| | $36 = 32^*$ | | |
| | $37 = \bar{34}$ | 0 | $288_{27} = \chi_{29,0}, \varphi_{18,0}$ |
| | $38 = \bar{36}$ | 0 | $288_{28} = \chi_{29,1}, \varphi_{18,1}$ |
| | $39 = \bar{35}$ | 0 | $288_{29} = \chi_{29,2}, \varphi_{18,2}$ |
| | $40 = 37^*$ | | |
| | $41 = 39^*$ | | |
| | $42 = 38^*$ | | |
| | 43 | 0 | $288_{33} = \chi_{30,0}, \varphi_{19,0}$ |
| | 44 | 0 | $288_{34} = \chi_{30,1}, \varphi_{19,1}$ |
| | 45 | 0 | $288_{35} = \chi_{30,2}, \varphi_{19,2}$ |
| | $46 = 43^*$ | | |
| | $47 = 45^*$ | | |
| | $48 = 44^*$ | | |
| | $49 = \bar{46}$ | 0 | $288_{39} = \chi_{31,0}, \varphi_{20,0}$ |
| | $50 = \bar{48}$ | 0 | $288_{40} = \chi_{31,1}, \varphi_{20,1}$ |
| | $51 = \bar{47}$ | 0 | $288_{41} = \chi_{31,2}, \varphi_{20,2}$ |
| | $52 = 49^*$ | | |
| | $53 = 51^*$ | | |
| | $54 = 50^*$ | | |
| | 55 | 0 | $288_{45} = \chi_{32,0}, \varphi_{21,0}$ |
| | 56 | 0 | $288_{46} = \chi_{32,1}, \varphi_{21,1}$ |
| | 57 | 0 | $288_{47} = \chi_{32,2}, \varphi_{21,2}$ |
| | $58 = 55^*$ | | |
| | $59 = 57^*$ | | |
| | $60 = 56^*$ | | |
| | $61 = \bar{58}$ | 0 | $288_{51} = \chi_{33,0}, \varphi_{22,0}$ |
| | $62 = \bar{60}$ | 0 | $288_{52} = \chi_{33,1}, \varphi_{22,1}$ |
| | $63 = \bar{59}$ | 0 | $288_{53} = \chi_{33,2}, \varphi_{22,2}$ |
| | $64 = 61^*$ | | |
| | $65 = 63^*$ | | |
| | $66 = 62^*$ | | |

| Block 1: | $\varphi_{1,0}$ | $\varphi_{2,0}$ | $\varphi_{12,0}$ |
|--------------------------|-----------------|-----------------|------------------|
| $1_1 = \chi_{1,0}$ | 1 | . | . |
| $56_1 = \chi_{2,0}$ | . | 1 | . |
| $57_1 = \chi_{3,0}$ | 1 | 1 | . |
| $342_1 = \chi_{13,0}$ | . | . | 1 |
| $342_4 = \chi_{14,0}$ | . | . | 1 |
| $342_7 = \chi_{15,0}$ | . | . | 1 |
| $342_{10} = \chi_{16,0}$ | . | . | 1 |
| $342_{13} = \chi_{17,0}$ | . | . | 1 |
| $342_{16} = \chi_{18,0}$ | . | . | 1 |
| $342_{19} = \chi_{19,0}$ | . | . | 1 |
| $343_1 = \chi_{20,0}$ | 1 | . | 1 |
| $399_1 = \chi_{21,0}$ | 1 | 1 | 1 |

$$\begin{aligned} \varphi_{1,0} &= 1_1 \\ \varphi_{2,0} &= 56_1 \\ \varphi_{12,0} &= 342_1 \end{aligned}$$

| Block 2: | $\varphi_{1,1}$ | $\varphi_{2,1}$ | $\varphi_{12,1}$ |
|--------------------------|-----------------|-----------------|------------------|
| $1_2 = \chi_{1,1}$ | 1 | . | . |
| $56_2 = \chi_{2,1}$ | . | 1 | . |
| $57_2 = \chi_{3,1}$ | 1 | 1 | . |
| $342_2 = \chi_{13,1}$ | . | . | 1 |
| $342_5 = \chi_{14,1}$ | . | . | 1 |
| $342_8 = \chi_{15,1}$ | . | . | 1 |
| $342_{11} = \chi_{16,1}$ | . | . | 1 |
| $342_{14} = \chi_{17,1}$ | . | . | 1 |
| $342_{17} = \chi_{18,1}$ | . | . | 1 |
| $342_{20} = \chi_{19,1}$ | . | . | 1 |
| $343_2 = \chi_{20,1}$ | 1 | . | 1 |
| $399_2 = \chi_{21,1}$ | 1 | 1 | 1 |

$$\begin{aligned} \varphi_{1,1} &= 1_2 \\ \varphi_{2,1} &= 56_2 \\ \varphi_{12,1} &= 342_2 \end{aligned}$$

| Block 3: | $\varphi_{1,2}$ | $\varphi_{2,2}$ | $\varphi_{12,2}$ | |
|--------------------------|-----------------|-----------------|------------------|--------------------------|
| $1_3 = \chi_{1,2}$ | 1 | . | . | |
| $56_3 = \chi_{2,2}$ | . | 1 | . | |
| $57_3 = \chi_{3,2}$ | 1 | 1 | . | |
| $342_3 = \chi_{13,2}$ | . | . | 1 | |
| $342_6 = \chi_{14,2}$ | . | . | 1 | $\varphi_{1,2} = 1_3$ |
| $342_9 = \chi_{15,2}$ | . | . | 1 | $\varphi_{2,2} = 56_3$ |
| $342_{12} = \chi_{16,2}$ | . | . | 1 | $\varphi_{12,2} = 342_3$ |
| $342_{15} = \chi_{17,2}$ | . | . | 1 | |
| $342_{18} = \chi_{18,2}$ | . | . | 1 | |
| $342_{21} = \chi_{19,2}$ | . | . | 1 | |
| $343_3 = \chi_{20,2}$ | 1 | . | 1 | |
| $399_3 = \chi_{21,2}$ | 1 | 1 | 1 | |

| Block 4: | φ_{3+} | |
|-----------------------|----------------|------------------------|
| $456_1 = \chi_{4+}$ | 1 | |
| $456_2 = \chi_{22,0}$ | 1 | $\varphi_{3+} = 456_1$ |
| $456_3 = \chi_{22,1}$ | 1 | |
| $456_4 = \chi_{22,2}$ | 1 | |

| Blocks 23, 26: | $\varphi_{13,0}$ | $\varphi_{23,0}$ | |
|--------------------------|------------------|------------------|--------------------------|
| $57_4 = \chi_{23,0}$ | 1 | . | |
| $57_{10} = \chi_{24,0}$ | 1 | . | |
| $342_{22} = \chi_{34,0}$ | . | 1 | |
| $342_{28} = \chi_{35,0}$ | . | 1 | |
| $342_{34} = \chi_{36,0}$ | . | 1 | $\varphi_{13,0} = 57_1$ |
| $342_{40} = \chi_{37,0}$ | . | 1 | $\varphi_{23,0} = 342_4$ |
| $342_{46} = \chi_{38,0}$ | . | 1 | |
| $342_{52} = \chi_{39,0}$ | . | 1 | |
| $342_{58} = \chi_{40,0}$ | . | 1 | |
| $399_4 = \chi_{41,0}$ | 1 | 1 | |
| $399_{10} = \chi_{42,0}$ | 1 | 1 | |
| $456_5 = \chi_{43,0}$ | 2 | 1 | |

| Blocks 24, 28: | $\varphi_{13,1}$ | $\varphi_{23,1}$ | |
|--------------------------|------------------|------------------|--------------------------|
| $57_5 = \chi_{23,1}$ | 1 | . | |
| $57_{11} = \chi_{24,1}$ | 1 | . | |
| $342_{23} = \chi_{34,1}$ | . | 1 | |
| $342_{29} = \chi_{35,1}$ | . | 1 | |
| $342_{35} = \chi_{36,1}$ | . | 1 | $\varphi_{13,1} = 57_2$ |
| $342_{41} = \chi_{37,1}$ | . | 1 | $\varphi_{23,1} = 342_5$ |
| $342_{47} = \chi_{38,1}$ | . | 1 | |
| $342_{53} = \chi_{39,1}$ | . | 1 | |
| $342_{59} = \chi_{40,1}$ | . | 1 | |
| $399_5 = \chi_{41,1}$ | 1 | 1 | |
| $399_{11} = \chi_{42,1}$ | 1 | 1 | |
| $456_6 = \chi_{43,1}$ | 2 | 1 | |

| Blocks 25, 27: | $\varphi_{13,2}$ | $\varphi_{23,2}$ | |
|--------------------------|------------------|------------------|--------------------------|
| $57_6 = \chi_{23,2}$ | 1 | . | |
| $57_{12} = \chi_{24,2}$ | 1 | . | |
| $342_{24} = \chi_{34,2}$ | . | 1 | |
| $342_{30} = \chi_{35,2}$ | . | 1 | |
| $342_{36} = \chi_{36,2}$ | . | 1 | $\varphi_{13,2} = 57_3$ |
| $342_{42} = \chi_{37,2}$ | . | 1 | $\varphi_{23,2} = 342_6$ |
| $342_{48} = \chi_{38,2}$ | . | 1 | |
| $342_{54} = \chi_{39,2}$ | . | 1 | |
| $342_{60} = \chi_{40,2}$ | . | 1 | |
| $399_6 = \chi_{41,2}$ | 1 | 1 | |
| $399_{12} = \chi_{42,2}$ | 1 | 1 | |
| $456_7 = \chi_{43,2}$ | 2 | 1 | |