

# $L_3(4).6 \pmod{3}$

|         | blocks | defect | matrix        |
|---------|--------|--------|---------------|
| $3.G :$ | 1      | 4      | $24 \times 3$ |
|         | 2      | 4      | $24 \times 3$ |
|         | 3      | 2      | $9 \times 1$  |
|         | 4      | 2      | $9 \times 1$  |

| <b>Block 1:</b>              | $\varphi_{1,0}$ | $\varphi_{2,1+}$ | $\varphi_{5,0}$ |
|------------------------------|-----------------|------------------|-----------------|
| $1_1 = \chi_{1,0}$           | 1               | .                | .               |
| $1_3 = \chi_{1,2}$           | 1               | .                | .               |
| $1_5 = \chi_{1,4}$           | 1               | .                | .               |
| $20_1 = \chi_{2,0}$          | 1               | .                | 1               |
| $20_3 = \chi_{2,2}$          | 1               | .                | 1               |
| $20_5 = \chi_{2,4}$          | 1               | .                | 1               |
| $105_2 = \chi_{3,1+}$        | 3               | 1                | 3               |
| $64_2 = \chi_{10,1}$         | .               | 1                | 1               |
| $64_4 = \chi_{10,3}$         | .               | 1                | 1               |
| $64_6 = \chi_{10,5}$         | .               | 1                | 1               |
| $45_2 = \chi_{32,1+}$        | .               | 1                | .               |
| $45_4 = \chi_{32,1*2+}$      | .               | 1                | .               |
| $21_1 = \chi_{35,0}$         | 2               | .                | 1               |
| $21_3 = \chi_{35,2}$         | 2               | .                | 1               |
| $21_5 = \chi_{35,4}$         | 2               | .                | 1               |
| $21_7 = \chi_{35,0}^{*2}$    | 2               | .                | 1               |
| $21_9 = \chi_{35,2}^{*2}$    | 2               | .                | 1               |
| $21_{11} = \chi_{35,4}^{*2}$ | 2               | .                | 1               |
| $84_2 = \chi_{40,1}$         | 1               | 1                | 2               |
| $84_4 = \chi_{40,3}$         | 1               | 1                | 2               |
| $84_6 = \chi_{40,5}$         | 1               | 1                | 2               |
| $84_8 = \chi_{40,1}^{*2}$    | 1               | 1                | 2               |
| $84_{10} = \chi_{40,3}^{*2}$ | 1               | 1                | 2               |
| $84_{12} = \chi_{40,5}^{*2}$ | 1               | 1                | 2               |

$$\begin{aligned}
 \varphi_{1,0} &= 1_1 \\
 \varphi_{2,1+} &= 45_2 \\
 \varphi_{5,0} &= 19_1
 \end{aligned}$$

| <b>Block 2:</b>              | $\varphi_{1,1}$ | $\varphi_{2,0+}$ | $\varphi_{5,1}$ |
|------------------------------|-----------------|------------------|-----------------|
| $1_2 = \chi_{1,1}$           | 1               | .                | .               |
| $1_4 = \chi_{1,3}$           | 1               | .                | .               |
| $1_6 = \chi_{1,5}$           | 1               | .                | .               |
| $20_2 = \chi_{2,1}$          | 1               | .                | 1               |
| $20_4 = \chi_{2,3}$          | 1               | .                | 1               |
| $20_6 = \chi_{2,5}$          | 1               | .                | 1               |
| $105_1 = \chi_{3,0+}$        | 3               | 1                | 3               |
| $64_1 = \chi_{10,0}$         | .               | 1                | 1               |
| $64_3 = \chi_{10,2}$         | .               | 1                | 1               |
| $64_5 = \chi_{10,4}$         | .               | 1                | 1               |
| $45_1 = \chi_{32,0+}$        | .               | 1                | .               |
| $45_3 = \chi_{32,0*2+}$      | .               | 1                | .               |
| $21_2 = \chi_{35,1}$         | 2               | .                | 1               |
| $21_4 = \chi_{35,3}$         | 2               | .                | 1               |
| $21_6 = \chi_{35,5}$         | 2               | .                | 1               |
| $21_8 = \chi_{35,1}^{*2}$    | 2               | .                | 1               |
| $21_{10} = \chi_{35,3}^{*2}$ | 2               | .                | 1               |
| $21_{12} = \chi_{35,5}^{*2}$ | 2               | .                | 1               |
| $84_1 = \chi_{40,0}$         | 1               | 1                | 2               |
| $84_3 = \chi_{40,2}$         | 1               | 1                | 2               |
| $84_5 = \chi_{40,4}$         | 1               | 1                | 2               |
| $84_7 = \chi_{40,0}^{*2}$    | 1               | 1                | 2               |
| $84_9 = \chi_{40,2}^{*2}$    | 1               | 1                | 2               |
| $84_{11} = \chi_{40,4}^{*2}$ | 1               | 1                | 2               |

$$\begin{aligned}
\varphi_{1,1} &= 1_2 \\
\varphi_{2,0+} &= 45_1 \\
\varphi_{5,1} &= 19_2
\end{aligned}$$

| <b>Block 3:</b>         | $\varphi_{6,0+}$ |
|-------------------------|------------------|
| $90_1 = \chi_{6,0+}$    | 1                |
| $90_2 = \chi_{6,1+}$    | 1                |
| $90_3 = \chi_{6,2+}$    | 1                |
| $90_4 = \chi_{36,0+}$   | 1                |
| $90_5 = \chi_{36,1+}$   | 1                |
| $90_6 = \chi_{36,2+}$   | 1                |
| $90_7 = \chi_{36,0*8+}$ | 1                |
| $90_8 = \chi_{36,1*8+}$ | 1                |
| $90_9 = \chi_{36,2*8+}$ | 1                |

$$\varphi_{6,0+} = 90_1$$

| <b>Block 4:</b>           | $\varphi_{8,0+}$ |
|---------------------------|------------------|
| $126_1 = \chi_{8,0+}$     | 1                |
| $126_2 = \chi_{8,1+}$     | 1                |
| $126_3 = \chi_{8,2+}$     | 1                |
| $126_4 = \chi_{38,0+}$    | 1                |
| $126_5 = \chi_{38,1+}$    | 1                |
| $126_6 = \chi_{38,2+}$    | 1                |
| $126_7 = \chi_{38,0*11+}$ | 1                |
| $126_8 = \chi_{38,1*11+}$ | 1                |
| $126_9 = \chi_{38,2*11+}$ | 1                |

$$\varphi_{8,0+} = 126_1$$