

$L_3(4).2_2 \pmod{2}$

	blocks	defect	matrix
$4_1.G :$	1 2	9 3	28×4 5×1
$12_1.G :$	3	8	26×5
$4_2.G :$	1 2	9 3	41×4 8×1
$12_2.G :$	3	8	28×5

Block 1:	$\varphi_{1,0}$	φ_{2+}	$\varphi_{4,0}$	$\varphi_{5,0}$	
$1_1 = \chi_{1,0}$	1	.	.	.	
$1_2 = \chi_{1,1}$	1	.	.	.	
$20_1 = \chi_{2,0}$	2	.	1	1	
$20_2 = \chi_{2,1}$	2	.	1	1	
$35_1 = \chi_{3,0}$	1	1	1	1	
$35_2 = \chi_{3,1}$	1	1	1	1	
$70_1 = \chi_{4+}$	2	2	2	2	
$45_1 = \chi_{6,0}$	2	1	2	1	
$45_2 = \chi_{6,1}$	2	1	2	1	
$45_3 = \chi_{7,0}$	2	1	1	2	
$45_4 = \chi_{7,1}$	2	1	1	2	
$126_1 = \chi_{8+}$	6	3	4	4	
$10_1 = \chi_{11,0}$	1	.	1	.	$\varphi_{1,0} = 1_1$
$10_2 = \chi_{11,1}$	1	.	1	.	$\varphi_{2+} = 16_1$
$10_3 = \chi_{12,0}$	1	.	.	1	$\varphi_{4,0} = 9_1$
$10_4 = \chi_{12,1}$	1	.	.	1	$\varphi_{5,0} = 9_2$
$56_1 = \chi_{13+}$	4	1	2	2	
$36_1 = \chi_{15,0}$	2	1	1	1	
$36_2 = \chi_{15,1}$	2	1	1	1	
$70_2 = \chi_{17,0}$	2	2	2	2	
$70_3 = \chi_{17,1}$	2	2	2	2	
$90_1 = \chi_{18,0}$	4	2	3	3	
$90_2 = \chi_{18,1}$	4	2	3	3	
$16_1 = \chi_{19+}$	.	1	.	.	
$16_2 = \chi_{20+}$	.	1	.	.	
$112_1 = \chi_{21+}$	8	2	4	4	
$160_1 = \chi_{23+}$	6	4	6	4	
$160_2 = \chi_{24+}$	6	4	4	6	

Block 2:	$\varphi_{6,0}$
$64_1 = \chi_{10,0}$	1
$64_2 = \chi_{10,1}$	1
$64_3 = \chi_{16,0}$	1
$64_4 = \chi_{16,1}$	1
$128_1 = \chi_{22+}$	2

$$\varphi_{6,0} = 64_1$$

Block 3:	φ_{7+}	φ_{8+}	φ_{9+}	φ_{10+}	φ_{11+}
$30_1 = \chi_{32+}$	1	1	1	.	.
$30_2 = \chi_{33+}$	1	1	1	.	.
$30_3 = \chi_{34+}$	1	1	1	.	.
$42_1 = \chi_{35+}$	2	2	1	.	.
$90_3 = \chi_{36+}$	2	2	1	1	.
$90_4 = \chi_{37+}$	2	2	1	.	1
$126_2 = \chi_{38+}$	4	3	2	.	1
$126_3 = \chi_{39+}$	3	4	2	1	.
$168_1 = \chi_{40+}$	3	3	2	1	1
$12_1 = \chi_{41+}$	1	1	.	.	.
$72_1 = \chi_{42+}$	3	3	2	.	.
$84_1 = \chi_{43+}$	1	2	1	1	.
$84_2 = \chi_{44+}$	2	1	1	.	1
$120_1 = \chi_{45+}$	3	3	2	.	1
$120_2 = \chi_{46+}$	3	3	2	1	.
$180_1 = \chi_{47+}$	4	4	2	1	1
$48_1 = \chi_{48+}$	.	.	.	1	.
$48_2 = \chi_{48*29+}$	.	.	.	1	.
$48_3 = \chi_{49+}$	.	.	.	.	1
$48_4 = \chi_{49*29+}$	.	.	.	.	1
$96_1 = \chi_{50+}$	3	2	1	.	1
$96_2 = \chi_{50*41+}$	2	3	1	1	.
$96_3 = \chi_{50*31+}$	3	2	1	.	1
$96_4 = \chi_{51+}$	2	3	1	1	.
$240_1 = \chi_{52+}$	6	6	4	1	1
$240_2 = \chi_{52*5+}$	6	6	4	1	1

$$\begin{aligned} \varphi_{7+} &= 6_1 \\ \varphi_{8+} &= 6_2 \\ \varphi_{9+} &= 18_1 \\ \varphi_{10+} &= 48_1 \\ \varphi_{11+} &= 48_2 \end{aligned}$$

Block 1:	$\varphi_{1,0}$	φ_{2+}	$\varphi_{4,0}$	$\varphi_{5,0}$
$1_1 = \chi_{1,0}$	1	.	.	.
$1_2 = \chi_{1,1}$	1	.	.	.
$20_1 = \chi_{2,0}$	2	.	1	1
$20_2 = \chi_{2,1}$	2	.	1	1
$35_1 = \chi_{3,0}$	1	1	1	1
$35_2 = \chi_{3,1}$	1	1	1	1
$70_1 = \chi_{4+}$	2	2	2	2
$45_1 = \chi_{6,0}$	2	1	2	1
$45_2 = \chi_{6,1}$	2	1	2	1
$45_3 = \chi_{7,0}$	2	1	1	2
$45_4 = \chi_{7,1}$	2	1	1	2
$126_1 = \chi_{8+}$	6	3	4	4
$10_1 = \chi_{11,0}$	1	.	1	.
$10_2 = \chi_{11,1}$	1	.	1	.
$10_3 = \chi_{12,0}$	1	.	.	1
$10_4 = \chi_{12,1}$	1	.	.	1
$56_1 = \chi_{13+}$	4	1	2	2
$36_1 = \chi_{15,0}$	2	1	1	1
$36_2 = \chi_{15,1}$	2	1	1	1
$70_2 = \chi_{17,0}$	2	2	2	2
$70_3 = \chi_{17,1}$	2	2	2	2
$90_1 = \chi_{18,0}$	4	2	3	3
$90_2 = \chi_{18,1}$	4	2	3	3
$20_3 = \chi_{25,0}$	2	.	1	1
$20_4 = \chi_{25,1}$	2	.	1	1
$20_5 = \chi_{25,0}^{*3}$	2	.	1	1
$20_6 = \chi_{25,1}^{*3}$	2	.	1	1
$56_2 = \chi_{26+}$	4	1	2	2
$56_3 = \chi_{26*11+}$	4	1	2	2
$36_3 = \chi_{28,0}$	2	1	1	1
$36_4 = \chi_{28,1}$	2	1	1	1
$36_5 = \chi_{28,0}^{*3}$	2	1	1	1
$36_6 = \chi_{28,1}^{*3}$	2	1	1	1
$80_1 = \chi_{30,0}$	3	2	3	2
$80_2 = \chi_{30,1}$	3	2	3	2
$80_3 = \chi_{30,0}^{*15}$	3	2	3	2
$80_4 = \chi_{30,1}^{*15}$	3	2	3	2
$80_5 = \chi_{31,0}$	3	2	2	3
$80_6 = \chi_{31,1}$	3	2	2	3
$80_7 = \chi_{31,0}^{*15}$	3	2	2	3

(Block 1:)	$\varphi_{1,0}$	φ_{2+}	$\varphi_{4,0}$	$\varphi_{5,0}$	$\varphi_{1,0} = 1_1$
					$\varphi_{2+} = 16_1$
$80_8 = \chi_{31,1}^{*15}$	3	2	2	3	$\varphi_{4,0} = 9_1$
					$\varphi_{5,0} = 9_2$

Block 2:	$\varphi_{6,0}$	
$64_1 = \chi_{10,0}$	1	
$64_2 = \chi_{10,1}$	1	
$64_3 = \chi_{16,0}$	1	
$64_4 = \chi_{16,1}$	1	$\varphi_{6,0} = 64_1$
$64_5 = \chi_{29,0}$	1	
$64_6 = \chi_{29,1}$	1	
$64_7 = \chi_{29,0}^{*3}$	1	
$64_8 = \chi_{29,1}^{*3}$	1	

Block 3:	φ_{7+}	φ_{8+}	φ_{9+}	φ_{10+}	φ_{11+}
$30_1 = \chi_{32+}$	1	1	1	.	.
$30_2 = \chi_{33+}$	1	1	1	.	.
$30_3 = \chi_{34+}$	1	1	1	.	.
$42_1 = \chi_{35+}$	2	2	1	.	.
$90_3 = \chi_{36+}$	2	2	1	1	.
$90_4 = \chi_{37+}$	2	2	1	.	1
$126_2 = \chi_{38+}$	4	3	2	.	1
$126_3 = \chi_{39+}$	3	4	2	1	.
$168_1 = \chi_{40+}$	3	3	2	1	1
$12_1 = \chi_{41+}$	1	1	.	.	.
$72_1 = \chi_{42+}$	3	3	2	.	.
$84_1 = \chi_{43+}$	1	2	1	1	.
$84_2 = \chi_{44+}$	2	1	1	.	1
$120_1 = \chi_{45+}$	3	3	2	.	1
$120_2 = \chi_{46+}$	3	3	2	1	.
$180_1 = \chi_{47+}$	4	4	2	1	1
$72_2 = \chi_{53+}$	3	3	2	.	.
$72_3 = \chi_{53*7+}$	3	3	2	.	.
$96_1 = \chi_{54+}$	3	2	1	.	1
$96_2 = \chi_{55+}$	2	3	1	1	.
$96_3 = \chi_{54*31+}$	3	2	1	.	1
$96_4 = \chi_{54*11+}$	2	3	1	1	.
$120_3 = \chi_{56+}$	3	3	2	.	1
$120_4 = \chi_{56*43+}$	3	3	2	.	1
$120_5 = \chi_{57+}$	3	3	2	1	.
$120_6 = \chi_{57*43+}$	3	3	2	1	.
$168_2 = \chi_{58+}$	3	3	2	1	1
$168_3 = \chi_{58*7+}$	3	3	2	1	1

$$\begin{aligned}
\varphi_{7+} &= 6_1 \\
\varphi_{8+} &= 6_2 \\
\varphi_{9+} &= 18_1 \\
\varphi_{10+} &= 48_1 \\
\varphi_{11+} &= 48_2
\end{aligned}$$