

$L_3(4).2_2 \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	5×3
	2	1	5×3
	3	0	$35_1 = \chi_{3,0}, \varphi_{3,0}$
	4	0	$35_2 = \chi_{3,1}, \varphi_{3,1}$
	5	0	$70_1 = \chi_{4+}, \varphi_{4+}$
	6	0	$126_1 = \chi_{8+}, \varphi_{7+}$
$2.G :$	7	1	5×3
	8	1	5×3
	9	0	$56_1 = \chi_{13+}, \varphi_{11+}$
	10	0	$70_2 = \chi_{17,0}, \varphi_{14,0}$
	11 = $\overline{10}$	0	$70_3 = \chi_{17,1}, \varphi_{14,1}$
$4_1.G :$	12	1	5×3
	13	0	$112_1 = \chi_{21+}, \varphi_{17+}$
$4_2.G :$	14	1	5×3
	15	1	5×3
	16 = 14^*		
	17 = 15^*		

	blocks	defect	matrix
	18 19 = 18^*	0	$56_2 = \chi_{26+}, \varphi_{20+}$
$3.G :$	20	1	5×3
	21	0	$42_1 = \chi_{35+}, \varphi_{27+}$
	22	0	$126_2 = \chi_{38+}, \varphi_{28+}$
	23 = $\overline{22}$	0	$126_3 = \chi_{39+}, \varphi_{29+}$
	24	0	$168_1 = \chi_{40+}, \varphi_{30+}$
$6.G :$	25	1	5×3
	26	0	$84_1 = \chi_{43+}, \varphi_{33+}$
	27 = $\overline{26}$	0	$84_2 = \chi_{44+}, \varphi_{34+}$
$12_1.G :$	28	1	5×3
	29	1	5×3
$12_2.G :$	30	1	5×3
	31 = $30 * 7$		
	32	0	$168_2 = \chi_{58+}, \varphi_{42+}$
	33 = $32 * 7$		

Block 1:	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{6,0}$	
$1_1 = \chi_{1,0}$	1	.	.	$\varphi_{1,0} = 1_1$
$20_1 = \chi_{2,0}$	1	1	.	$\varphi_{2,0} = 19_1$
$45_1 = \chi_{6,0}$	.	.	1	$\varphi_{6,0} = 45_1$
$45_3 = \chi_{7,0}$	.	.	1	
$64_1 = \chi_{10,0}$	.	1	1	

Block 2:	$\varphi_{1,1}$	$\varphi_{2,1}$	$\varphi_{6,1}$	
$1_2 = \chi_{1,1}$	1	.	.	$\varphi_{1,1} = 1_2$
$20_2 = \chi_{2,1}$	1	1	.	$\varphi_{2,1} = 19_2$
$45_2 = \chi_{6,1}$	.	.	1	$\varphi_{6,1} = 45_2$
$45_4 = \chi_{7,1}$	.	.	1	
$64_2 = \chi_{10,1}$	.	1	1	

Block 7:	$\varphi_{9,0}$	$\varphi_{10,0}$	$\varphi_{13,1}$
$10_1 = \chi_{11,0}$	1	.	.
$10_3 = \chi_{12,0}$	1	.	.
$36_1 = \chi_{15,0}$	1	1	.
$64_4 = \chi_{16,1}$	.	.	1
$90_2 = \chi_{18,1}$	.	1	1

$$\begin{aligned}\varphi_{9,0} &= 10_1 \\ \varphi_{10,0} &= 26_1 \\ \varphi_{13,1} &= 64_2\end{aligned}$$

Block 8:	$\varphi_{9,1}$	$\varphi_{10,1}$	$\varphi_{13,0}$
$10_2 = \chi_{11,1}$	1	.	.
$10_4 = \chi_{12,1}$	1	.	.
$36_2 = \chi_{15,1}$	1	1	.
$64_3 = \chi_{16,0}$	.	.	1
$90_1 = \chi_{18,0}$	.	1	1

$$\begin{aligned}\varphi_{9,1} &= 10_2 \\ \varphi_{10,1} &= 26_2 \\ \varphi_{13,0} &= 64_1\end{aligned}$$

Block 12:	φ_{15+}	φ_{16+}	φ_{18+}
$16_1 = \chi_{19+}$	1	.	.
$16_2 = \chi_{20+}$	.	1	.
$128_1 = \chi_{22+}$	.	.	1
$160_1 = \chi_{23+}$	1	1	1
$160_2 = \chi_{24+}$	1	1	1

$$\begin{aligned}\varphi_{15+} &= 16_1 \\ \varphi_{16+} &= 16_2 \\ \varphi_{18+} &= 128_1\end{aligned}$$

Blocks 14, 16:	$\varphi_{19,0}$	$\varphi_{22,1}$	$\varphi_{23,0}$
$20_3 = \chi_{25,0}$	1	.	.
$36_4 = \chi_{28,1}$	.	1	.
$64_5 = \chi_{29,0}$	1	.	1
$80_2 = \chi_{30,1}$	.	1	1
$80_6 = \chi_{31,1}$	.	1	1

$$\begin{aligned}\varphi_{19,0} &= 20_1 \\ \varphi_{22,1} &= 36_2 \\ \varphi_{23,0} &= 44_1\end{aligned}$$

Blocks 15, 17:	$\varphi_{19,1}$	$\varphi_{22,0}$	$\varphi_{23,1}$
$20_4 = \chi_{25,1}$	1	.	.
$36_3 = \chi_{28,0}$	.	1	.
$64_6 = \chi_{29,1}$	1	.	1
$80_1 = \chi_{30,0}$	.	1	1
$80_5 = \chi_{31,0}$	.	1	1

$$\begin{aligned}\varphi_{19,1} &= 20_2 \\ \varphi_{22,0} &= 36_1 \\ \varphi_{23,1} &= 44_2\end{aligned}$$

Block 20:	φ_{24+}	φ_{25+}	φ_{26+}
$30_1 = \chi_{32+}$	1	.	.
$30_2 = \chi_{33+}$	.	1	.
$30_3 = \chi_{34+}$	.	.	1
$90_3 = \chi_{36+}$	1	1	1
$90_4 = \chi_{37+}$	1	1	1

$$\begin{aligned}\varphi_{24+} &= 30_1 \\ \varphi_{25+} &= 30_2 \\ \varphi_{26+} &= 30_3\end{aligned}$$

Block 25:	φ_{31+}	φ_{32+}	φ_{35+}
$12_1 = \chi_{41+}$	1	.	.
$72_1 = \chi_{42+}$	.	1	.
$120_1 = \chi_{45+}$	1	.	1
$120_2 = \chi_{46+}$	1	.	1
$180_1 = \chi_{47+}$	.	1	1

$$\begin{aligned}\varphi_{31+} &= 12_1 \\ \varphi_{32+} &= 72_1 \\ \varphi_{35+} &= 108_1\end{aligned}$$

Block 28:	φ_{36+}	φ_{37+}	φ_{38+}
$48_1 = \chi_{48+}$	1	.	.
$48_3 = \chi_{49+}$	1	.	.
$96_1 = \chi_{50+}$	.	1	.
$96_4 = \chi_{51+}$	.	.	1
$240_1 = \chi_{52+}$	1	1	1

$$\begin{aligned}\varphi_{36+} &= 48_1 \\ \varphi_{37+} &= 96_1 \\ \varphi_{38+} &= 96_4\end{aligned}$$

Block 29:	φ_{36*5+}	φ_{37*41+}	φ_{37*31+}
$48_2 = \chi_{48*29+}$	1	.	.
$48_4 = \chi_{49*29+}$	1	.	.
$96_2 = \chi_{50*41+}$	.	1	.
$96_3 = \chi_{50*31+}$	.	.	1
$240_2 = \chi_{52*5+}$	1	1	1

$$\begin{aligned}\varphi_{36*5+} &= 48_2 \\ \varphi_{37*41+} &= 96_2 \\ \varphi_{37*31+} &= 96_3\end{aligned}$$

Block 30:	φ_{39+}	φ_{40+}	φ_{41+}
$72_2 = \chi_{53+}$	.	1	.
$96_1 = \chi_{54+}$	.	.	1
$96_2 = \chi_{55+}$	1	1	.
$120_3 = \chi_{56+}$	1	.	1
$120_5 = \chi_{57+}$	1	.	1

$$\begin{aligned}\varphi_{39+} &= 24_1 \\ \varphi_{40+} &= 72_2 \\ \varphi_{41+} &= 96_1\end{aligned}$$