

# $L_3(4) \pmod{2}$

	blocks	defect	matrix
$4_1.G :$	1 2	8 2	$26 \times 5$ $4 \times 1$
$12_1.G :$	3 $4 = 3 * 5$	8	$26 \times 5$
$4_2.G :$	1 2	8 2	$28 \times 5$ $4 \times 1$
$12_2.G :$	3 $4 = 3 * 5$	8	$28 \times 5$

<b>Block 1:</b>	$\varphi_1$	$\varphi_2$	$\varphi_3$	$\varphi_4$	$\varphi_5$
$1_1 = \chi_1$	1	.	.	.	.
$20_1 = \chi_2$	2	.	.	1	1
$35_1 = \chi_3$	1	1	1	1	1
$35_2 = \chi_4$	1	1	1	1	1
$35_3 = \chi_5$	1	1	1	1	1
$45_1 = \chi_6$	2	1	1	2	1
$45_2 = \chi_7$	2	1	1	1	2
$63_1 = \chi_8$	3	2	1	2	2
$63_2 = \chi_9$	3	1	2	2	2
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$10_1 = \chi_{11}$	1	.	.	1	.
$10_2 = \chi_{12}$	1	.	.	.	1
$28_1 = \chi_{13}$	2	1	.	1	1
$28_2 = \chi_{14}$	2	.	1	1	1
$36_1 = \chi_{15}$	2	1	1	1	1
$70_1 = \chi_{17}$	2	2	2	2	2
$90_1 = \chi_{18}$	4	2	2	3	3
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$8_1 = \chi_{19}$	.	1	.	.	.
$8_2 = \chi_{19}^{*11}$	.	1	.	.	.
$8_3 = \chi_{20}$	.	.	1	.	.
$8_4 = \chi_{20}^{*11}$	.	.	1	.	.
$56_1 = \chi_{21}$	4	1	1	2	2
$56_2 = \chi_{21}^{*3}$	4	1	1	2	2
$80_1 = \chi_{23}$	3	2	2	3	2
$80_2 = \chi_{23}^{*15}$	3	2	2	3	2
$80_3 = \chi_{24}$	3	2	2	2	3
$80_4 = \chi_{24}^{*15}$	3	2	2	2	3

$$\begin{aligned}
 \varphi_1 &= 1_1 \\
 \varphi_2 &= 8_1 \\
 \varphi_3 &= 8_2 \\
 \varphi_4 &= 9_1 \\
 \varphi_5 &= 9_2
 \end{aligned}$$

<b>Block 2:</b>	$\varphi_6$	
$64_1 = \chi_{10}$	1	$\varphi_6 = 64_1$
$64_2 = \chi_{16}$	1	
$64_3 = \chi_{22}$	1	
$64_4 = \chi_{22}^{*3}$	1	

<b>Block 3:</b>	$\varphi_7$	$\varphi_8$	$\varphi_9$	$\varphi_{10}$	$\varphi_{11}$	
$15_1 = \chi_{32}$	1	1	1	.	.	$\varphi_7 = 3_1$ $\varphi_8 = 3_3$ $\varphi_9 = 9_3$ $\varphi_{10} = 24_1$ $\varphi_{11} = 24_3$
$15_3 = \chi_{33}$	1	1	1	.	.	
$15_5 = \chi_{34}$	1	1	1	.	.	
$21_1 = \chi_{35}$	2	2	1	.	.	
$45_3 = \chi_{36}$	2	2	1	1	.	
$45_5 = \chi_{37}$	2	2	1	.	1	
$63_3 = \chi_{38}$	4	3	2	.	1	
$63_5 = \chi_{39}$	3	4	2	1	.	
$84_1 = \chi_{40}$	3	3	2	1	1	
$6_1 = \chi_{41}$	1	1	.	.	.	
$36_2 = \chi_{42}$	3	3	2	.	.	
$42_1 = \chi_{43}$	1	2	1	1	.	
$42_3 = \chi_{44}$	2	1	1	.	1	
$60_1 = \chi_{45}$	3	3	2	.	1	
$60_3 = \chi_{46}$	3	3	2	1	.	
$90_2 = \chi_{47}$	4	4	2	1	1	
$24_1 = \chi_{48}$	.	.	.	1	.	
$24_3 = \chi_{48}^{*43}$	.	.	.	1	.	
$24_5 = \chi_{49}$	.	.	.	.	1	
$24_7 = \chi_{49}^{*43}$	.	.	.	.	1	
$48_1 = \chi_{50}$	3	2	1	.	1	
$48_3 = \chi_{50}^{*31}$	3	2	1	.	1	
$48_5 = \chi_{51}$	2	3	1	1	.	
$48_7 = \chi_{51}^{*31}$	2	3	1	1	.	
$120_1 = \chi_{52}$	6	6	4	1	1	
$120_3 = \chi_{52}^{*7}$	6	6	4	1	1	

<b>Block 1:</b>	$\varphi_1$	$\varphi_2$	$\varphi_3$	$\varphi_4$	$\varphi_5$
$1_1 = \chi_1$	1	.	.	.	.
$20_1 = \chi_2$	2	.	.	1	1
$35_1 = \chi_3$	1	1	1	1	1
$35_2 = \chi_4$	1	1	1	1	1
$35_3 = \chi_5$	1	1	1	1	1
$45_1 = \chi_6$	2	1	1	2	1
$45_2 = \chi_7$	2	1	1	1	2
$63_1 = \chi_8$	3	2	1	2	2
$63_2 = \chi_9$	3	1	2	2	2
$10_1 = \chi_{11}$	1	.	.	1	.
$10_2 = \chi_{12}$	1	.	.	.	1
$28_1 = \chi_{13}$	2	1	.	1	1
$28_2 = \chi_{14}$	2	.	1	1	1
$36_1 = \chi_{15}$	2	1	1	1	1
$70_1 = \chi_{17}$	2	2	2	2	2
$90_1 = \chi_{18}$	4	2	2	3	3
$20_2 = \chi_{25}$	2	.	.	1	1
$20_3 = \chi_{25}^{*3}$	2	.	.	1	1
$28_3 = \chi_{26}$	2	1	.	1	1
$28_4 = \chi_{26}^{*11}$	2	1	.	1	1
$28_5 = \chi_{27}$	2	.	1	1	1
$28_6 = \chi_{27}^{*11}$	2	.	1	1	1
$36_2 = \chi_{28}$	2	1	1	1	1
$36_3 = \chi_{28}^{*3}$	2	1	1	1	1
$80_1 = \chi_{30}$	3	2	2	3	2
$80_2 = \chi_{30}^{*15}$	3	2	2	3	2
$80_3 = \chi_{31}$	3	2	2	2	3
$80_4 = \chi_{31}^{*15}$	3	2	2	2	3

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_2 &= 8_1 \\ \varphi_3 &= 8_2 \\ \varphi_4 &= 9_1 \\ \varphi_5 &= 9_2 \end{aligned}$$

<b>Block 2:</b>	$\varphi_6$
$64_1 = \chi_{10}$	1
$64_2 = \chi_{16}$	1
$64_3 = \chi_{29}$	1
$64_4 = \chi_{29}^{*3}$	1

$$\varphi_6 = 64_1$$

<b>Block 3:</b>	$\varphi_7$	$\varphi_8$	$\varphi_9$	$\varphi_{10}$	$\varphi_{11}$
$15_1 = \chi_{32}$	1	1	1	.	.
$15_3 = \chi_{33}$	1	1	1	.	.
$15_5 = \chi_{34}$	1	1	1	.	.
$21_1 = \chi_{35}$	2	2	1	.	.
$45_3 = \chi_{36}$	2	2	1	1	.
$45_5 = \chi_{37}$	2	2	1	.	1
$63_3 = \chi_{38}$	4	3	2	.	1
$63_5 = \chi_{39}$	3	4	2	1	.
$84_1 = \chi_{40}$	3	3	2	1	1
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$6_1 = \chi_{41}$	1	1	.	.	.
$36_4 = \chi_{42}$	3	3	2	.	.
$42_1 = \chi_{43}$	1	2	1	1	.
$42_3 = \chi_{44}$	2	1	1	.	1
$60_1 = \chi_{45}$	3	3	2	.	1
$60_3 = \chi_{46}$	3	3	2	1	.
$90_2 = \chi_{47}$	4	4	2	1	1
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$36_6 = \chi_{53}$	3	3	2	.	.
$36_8 = \chi_{53}^{*7}$	3	3	2	.	.
$48_1 = \chi_{54}$	3	2	1	.	1
$48_3 = \chi_{54}^{*31}$	3	2	1	.	1
$48_5 = \chi_{55}$	2	3	1	1	.
$48_7 = \chi_{55}^{*31}$	2	3	1	1	.
$60_5 = \chi_{56}$	3	3	2	.	1
$60_7 = \chi_{56}^{*43}$	3	3	2	.	1
$60_9 = \chi_{57}$	3	3	2	1	.
$60_{11} = \chi_{57}^{*43}$	3	3	2	1	.
$84_3 = \chi_{58}$	3	3	2	1	1
$84_5 = \chi_{58}^{*7}$	3	3	2	1	1

$$\begin{aligned}
\varphi_7 &= 3_1 \\
\varphi_8 &= 3_3 \\
\varphi_9 &= 9_3 \\
\varphi_{10} &= 24_1 \\
\varphi_{11} &= 24_3
\end{aligned}$$